



August 3, 2021

VIA E-FILING

The Honorable Colm F. Connolly
J. Caleb Boggs Federal Building
844 N. King Street
Room 4124, Unit 31
Wilmington, DE 19801-3555



**RE: *Par Pharmaceutical Inc., et al. v. Eagle Pharmaceuticals Inc.*
C.A. No. 18-cv-823-CFC-JLH
*Par Pharmaceutical Inc., et al. v. Amneal Pharmaceuticals of New
York LLC, et al.* C.A. No. 18-cv-2032-CFC-CJB (Consolidated)**

Dear Chief Judge Connolly:

In their unsolicited and procedurally improper letter of July 30, 2021, Defendants attempt to justify their reliance in post-trial briefing on an invalidity theory based on Original Vasostrict Lot 788435 not disclosed in any invalidity contentions or expert reports, as well as criticize certain of Par's proposed findings.

Defendants did not meet and confer with Par over the procedure for resolving the parties' objections to the other sides' Findings of Fact ("FOF"). They simply filed the letter shortly after the parties made their submissions, attacking Par's objection to the Lot 788435 evidence and seeking to buttress their own objections to Par's contentions. Had they conferred, Defendants would have learned that Par's view is that such matters are best resolved at argument, particularly in light of the Court's strict order on the timing of briefing. *See* Tr. 917:21-25.

If the Court is inclined to consider Defendants' letter, we ask the Court also to consider the following history of this dispute.

As in all patent cases, the parties developed their theories and evidence through detailed contentions and expert reports. In the Amneal case, Lot 788435 was neither relied on, nor mentioned, in any contention or report. In the Eagle case, Eagle provided a short report from Dr. Park on February 2, 2021, to adopt certain opinions of Amneal expert Dr. Winter and thereby allow the parties to streamline the trial. *See* Exhibit A. In the last paragraph of that report, Eagle made a passing reference to Lot 788435 in a list of other Original Vasostrict Lots:

8. I have now been informed that Par recently produced additional sales data for lots of Original Vasostrict that it sold prior to the earliest effective filing dates of the Patents-in-Suit that had not been produced at the time of my Reply Report. *See* PAR-VASO_0297182 at 182–219. Those sales records confirm that a number of lots of Original Vasostrict for which I had cited stability testing in my Reply Report were in fact sold by Par before the priority date of the Patents-in-Suit. *See* PAR-VASO_0297182 at 182–219. This includes at least lots 788442, 788432, 788433, 788435, 802171. *See* PAR-VASO_0297182 at 182–219; PAR-VASO_0050216 at 224–243. I understand that these lots were on sale and in use before the Patents-in-Suit and, therefore, are prior art reflective of the commercial Original Vasostrict product. In addition, I understand that the sales data recently produced by Par (and cited in Dr. Winter’s Opening Report) confirms that lot 788436 was also sold before the priority date of the Patents-in-Suit. *See* PAR-VASO_0297182 at 190–91.

That is the sole reference to Lot 788435 in any defense contention or expert report in either case. Given the limited nature of the report, Par did not request an additional deposition of Dr. Park.

At about the same time, Eagle disclosed that it had failed to produce critical stability data relating to Eagle’s ANDA product. The Court delayed the trial until July to allow Par the opportunity to take discovery. In late May, Dr. Park served another report that contained invalidity opinions relating to, among other things, Original Vasostrict; however, Dr. Park made no mention of Lot 788435.

When the parties picked up trial preparations in June, they revised the pretrial orders in both cases. The original and amended Amneal pretrial orders make no mention of Lot 788435. The same was true of the Eagle pretrial order – until 5 days before the revised pretrial order was due and 18 days before trial, when in a large group of edits, Eagle slipped in a few references to Lot 788435 among a list of Original Vasostrict lots. Eagle PTO Ex. 3 ¶¶ 200, 207, 234 (redline attached as Exhibit B). While providing highly detailed contentions in other respects, Eagle did not disclose its plan to try the case based on that lot.

On July 6, the night before trial, the parties exchanged opening slides. Par was shocked to see that Defendants had identified Lot 788435 as their primary invalidity reference. Par objected in a meet and confer that night and renewed the objection before openings began. Tr. 6:17-8:5.

On July 8, Defendants called Dr. Park and put up a slide with 24-month impurity data for Lot 788435. Par renewed its objection to use of the impurity data at the outset of the testimony (Tr. 332:9-22) and then again when Dr. Park began to discuss Lot 788435 (Tr. 399:7-401:4). Defense counsel represented that the theory had been disclosed in Dr. Park's February 2, 2021 report. Tr. 401:6-21. The Court was forced to evaluate the report on the fly and then sustained the objection. Tr. 401:5-410:19. But a few minutes later, defense counsel asked about impurities anyway, drawing an unambiguous warning:

Q. And would you expect that there would have been a difference of impurities for this lot if it had drifted to 3.65?

MR. BLACK: Objection, Your Honor. Impurities of lot 788435, that whole issue was stricken. He's allowed to talk about pH but not impurities. He's trying to get it in through the back door.

MS. WACKER: I was asking, trying to ask him if he expected a different formulation if they changed the pH.

THE COURT: All right.

MS. WACKER: Anyway, I already asked the question and he gave an answer.

THE COURT: Well, wait, wait, wait, wait. Time out. You already asked the question?

MS. WACKER: I asked an earlier question that I think covers it.

THE COURT: Don't you think it was in violation of what my ruling was about five minutes ago?

MS. WACKER: Sorry.

THE COURT: Let's not try to back-door a document into evidence that I've already said can't come in.

MS. WACKER: I apologize, Your Honor.

THE COURT: I will strike the question. Let's move on and let's try to avoid doing that in the future.

Tr. 414:15-415:14.

On rebuttal, Par called Dr. Kirsch to testify on validity. During cross examination, Defendants asked him to confirm the 12-month pH and impurity data shown in DTX-360 for Lot 788435, but unsurprisingly, they did not ask Dr. Kirsch whether he believed that a POSA would have viewed the impurity data as making the asserted claims obvious. The Defendants asked no questions of Dr. Kirsch in relation to the 6- and 9-month impurity data. *See* Tr. 858:3-862:8.

Pursuant to the Court's briefing schedule, the parties exchanged opening briefs on July 19. Defendants provided detailed proposed findings of fact with respect to the impurities in Lot 788435 (DFF 98, 100-106, 108-114), including 14 findings relating to the 6- and 9-month impurity data for which there was no testimony at trial (DFF 92-98 and 100-106). Curiously, the 6- and 9-month data are not even referenced in Defendants' post-trial brief. We can only surmise that the intended audience for those findings is in Washington.

In short, the parties litigated this case vigorously for years, spending millions of dollars on preparing for an invalidity case that the Defendants elected not to present. Instead, they decided to anchor the case around Lot 788435, the sole pretrial disclosure for which was in the above-cited paragraph.

Defendants say that Par's objection is unfounded because DTX-360 was discussed at trial. They misapprehend the objection. The problem here is not whether DTX-360 contains admissible evidence, such as pH values, but whether the Lot 788435 impurity theory of invalidity can be entertained when it was never disclosed in an invalidity contention or an expert report. Adding an edit to a vague paragraph in the pretrial order two weeks before trial is insufficient notice and does not validate Eagle's conduct—indeed it shows premeditation.

The question is what to do about all this. Had Defendants presented the Lot 788435 impurity data theory after the close of contentions and expert reports, they would have had to meet the *Pennypack* factors to add the new theory. *See Konstantopoulos v. Westvaco Corp.*, 112 F.3d 710, 719 (3d Cir. 1997) (citing *Pennypack Woods Home Ownership Ass'n*, 559 F.2d 894, 904-05 (3d Cir. 1977)). But they did not ask for that permission and obviously cannot do so after trial. Moreover, Defendants cite repeatedly in their post-trial brief to *In re Brimonidine*. That case is instructive, but not for the reason Defendants cite. There, like here, the defendant put forward a theory of invalidity at trial based on references without supporting expert testimony. The Federal Circuit held that the district court had discretion in such a case to ignore the theory. *In re Brimonidine*, 643 F.3d 1366, 1376 (Fed. Cir. 2011). For both these reasons, the Court should strike DFF 92-98,

100-106, and 108-114. *See also Alexsam, Inc. v. IDT Corp.*, 715 F.3d 1336, 1347-48 (Fed. Cir. 2013) (expert testimony required to explain references and motivation to combine); *Finjan, Inc. v. Sophos, Inc.*, 2016 WL 4560071, at *10 (N.D. Cal. Aug. 22, 2016) (to same effect).

To be sure, for the reasons stated in Par's post-trial brief on invalidity and unenforceability, Defendants' 788435 invalidity theory is deeply flawed both legally and factually, and the Court could rule on that basis alone. But there is a larger issue. This District has a well-developed procedures in patent cases designed to prevent trial by surprise—including, most importantly, an exchange of contentions and the fleshing out of those contentions in detailed expert reports and depositions. Defendants now seek to circumvent that process by relying on scientific data their expert did not discuss and filling in the blanks with lawyer argument. It is doubtful whether that is ever appropriate, but surely, a party who proposes to take such an unusual path to trial has an affirmative obligation to follow the disclosure rules. That simply did not happen here.

Finally, Defendants' letter includes a paragraph challenging certain of Par's FOFs. The only specific charge they make relates to Par's contentions in FOF 29, 163, and 323 that the claimed inventions provided a longer shelf life. There was detailed testimony to that effect at trial. *See, e.g.*, DTDX-2 (Kannan 2019 Tr.) 235:18-22, 235:24-236:5, 297:9-298:5, 298:8-298:13; DTDX-3 (Kenney 2019 Tr.) 87:15-88:5; DTDX-4 (Kenney 2020 Tr.) 154:14-15, 154:17-25, 217:3-17, 217:19-21, 219:19-24, 220:20-221:7; DTDX-8 (Vandse 2020 Tr.) 181:12-182:12; Tr. 799:20-800:4, 888:5-17 (Kirsch). Dr. Kirsch provided an unrebutted opinion based on the inventor testimony, and Defendants agreed to the admission of the underlying study data (PTX-252 and DTX-53). We fail to see the problem, much less a parallel to Defendants' extraordinary conduct.

Respectfully submitted,

/s/ Brian E. Farnan

Brian E. Farnan

Cc: Counsel of Record (Via E-Mail)

EXHIBIT A

CONFIDENTIAL – PURSUANT TO PROTECTIVE ORDER

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

PAR PHARMACEUTICAL, INC., PAR
STERILE PRODUCTS, LLC, and ENDO
PAR INNOVATION COMPANY, LLC,
Plaintiffs,

v.

EAGLE PHARMACEUTICALS INC.,
Defendant.

C.A. No. 18-00823-CFC



EXPERT REPORT OF KINAM PARK, PH.D.



1. My name is Kinam Park, Ph.D. I have previously provided Opening, Reply, and Supplemental Reports regarding the invalidity and unenforceability of the asserted claims of U.S. Patent Nos. 9,687,526¹ (the “’526 patent”), 9,744,209 (the “’209 patent”), and 9,750,785 (the “’785 patent”), as well as the unenforceability of certain claims of U.S. Patent No. 9,744,239 (the “’239 patent”). I also have provided Rebuttal and Supplemental Reports regarding noninfringement of those asserted claims.

2. In my Opening, Reply, and Supplemental Reports regarding invalidity, I explained why, in my view, the sale and use of the prior art Original Vasostrict and Pitressin products with their product labeling anticipated or rendered obvious each asserted claim of the Patents-in-Suit. I provide this Report to adopt certain opinions previously offered by Gerhard Winter, Ph.D., on behalf of Defendants Amneal EU, Limited, Amneal Pharmaceuticals of New York, LLC, Amneal Biosciences LLC, Amneal Pharmaceutical Pvt. Ltd. (collectively “Amneal”), address dependent claims of the ’209 patent asserted against Amneal, and address new evidence regarding the sales of Original Vasostrict.

3. I have reviewed Dr. Winter’s Opening Report regarding Original Vasostrict lot 788436, including with respect to that lot’s pH and impurities, and the asserted claims of the ’209 and ’785 patents. *See, e.g.*, Winter Opening Report ¶¶ 112, 230–72, 307. I generally agree with those opinions and adopt them, except in that it is my view that, based on the stability data for the registration batches of Original Vasostrict, a POSA would have reasonably expected vials from lot 788436 to maintain a generally stable pH for much of its shelf life and have a pH of 3.7 at least at some point at or after sale if stored under refrigerated conditions according to the product label, even if all vials from that lot would not necessarily have had the same pH, for example if they

¹ I understand that the ’526 patent is no longer asserted against Eagle.

[REDACTED]

were stored under different conditions.² As discussed by Dr. Winter and also below, I further understand that this lot of Original Vasostrict was sold prior to the earliest effective filing date of the Patents-in-Suit. *See* PAR-VASO_0297182 at 190–91.

4. I also understand that Par has asserted additional claims of the '209 patent against Amneal that are not currently asserted against Eagle, specifically claims 2, 6, and 8. Claim 2 recites 0.1 to 0.3% SEQ ID NO. 2 (Gly9-vasopressin), claim 6 recites 0.1 % SEQ ID. NO. 10 (D-Asn-vasopressin), and claim 8 recites 0.1% SEQ ID NO. 3 (Asp5-Vasopressin), 0.3% to 0.6% SEQ ID NO. 7 (Acetyl-Vasopressin), 0.1% SEQ ID NO. 10 (D-Asn-Vasopressin).

5. As I explained in my Opening Report, stability testing data confirms that each dependent claim of the '209 and '785 patent, including the three additional claims asserted against Amneal, is satisfied by, as well as obvious over, the Original Vasostrict (Opening Report ¶¶ 292–97) and Pitressin (Opening Report ¶¶ 167–77) products. Furthermore, as I explained in my Opening, Reply, and Supplemental Reports, it would have been obvious to a POSA to select commercially available low-impurity API in formulating vasopressin and, by doing so, a POSA would have achieved the claimed impurity levels. *See, e.g.*, Opening Report ¶¶ 142–43; Reply ¶¶ 87–88, 102, 111, 121; Supplemental Report ¶¶ 69–70, 82, 94.

6. In my Supplemental Report, I did not directly address claims 2, 6, and 8 of the '209 patent because they were not asserted against Eagle at that time. Supplemental Report ¶ 80. Based

² As Dr. Winter opined, as a general matter, the purpose of performing stability studies on registration batches is to provide the FDA with data that is representative of the stability behavior expected for the commercial product. For Original Vasostrict, the registration batches therefore are expected to be representative of the stability behavior of the commercial product. For Eagle's proposed ANDA product, in contrast, as I opined in my Rebuttal Report, the Optimization/Confirmation Batches are more representative of the product Eagle intends to market upon FDA approval, given the manufacturing changes that have been implemented subsequent to the manufacturing of Eagle's initial registration batches. *See* Rebuttal Expert Report ¶ 35.

on the calculations and data set forth in my Supplemental Report, that lot of Original Vasostriect satisfied the requirements of at least claim 2 at least at the 1 and 2 month time points by having 0.17% and 0.24% SEQ ID NO. 2 (Gly9-vasopressin), respectively. Supplemental Report ¶ 80; *see also, e.g.*, PAR-VASO_0108645. And as explained above and in my prior Reports, all dependent limitations are obvious over lot 78495, as well as over the Original Vasostriect and Pitressin products, because it would have been obvious for a POSA to select low-impurity API to formulate vasopressin.

7. In my Reply Report, I responded to Dr. Kirsch's argument that stability testing submitted by the inventors during prosecution demonstrated that the claimed pH values are critical over the prior art. *See, e.g.*, Reply Report ¶¶ 52–82. In Paragraph 53 of my Reply Report, I cited stability testing for lots of Eagle's ANDA product, Original Vasostriect, and Reformulated Vasostriect, noting that "Eagle's ANDA batches that fall outside the claims are at least as stable and often more stable than what Par contends is the commercial embodiment of its claimed inventions, reformulated Vasostriect®, with comparable or lower impurity levels over shelf life," and that "[t]o the extent that the testing presented by the inventors during prosecution and in the patent examples showed an advantage of the claimed pH range, testing of the prior art Vasostriect® formulation (to which Eagle's ANDA product is consistent) compared to reformulated Vasostriect® would have undermined that conclusion." *Id.* ¶ 53 (citing PAR-VASO_0024408–21 and PAR-VASO_0050219–319 (describing testing of Original and Reformulated Vasostriect lots)).

8. I have now been informed that Par recently produced additional sales data for lots of Original Vasostriect that it sold prior to the earliest effective filing dates of the Patents-in-Suit that had not been produced at the time of my Reply Report. *See* PAR-VASO_0297182 at 182–219. Those sales records confirm that a number of lots of Original Vasostriect for which I had cited

stability testing in my Reply Report were in fact sold by Par before the priority date of the Patents-in-Suit. *See* PAR-VASO_0297182 at 182–219. This includes at least lots 788442, 788432, 788433, 788435, 802171. *See* PAR-VASO_0297182 at 182–219; PAR-VASO_0050216 at 224–243. I understand that these lots were on sale and in use before the Patents-in-Suit and, therefore, are prior art reflective of the commercial Original Vasostrict product. In addition, I understand that the sales data recently produced by Par (and cited in Dr. Winter’s Opening Report) confirms that lot 788436 was also sold before the priority date of the Patents-in-Suit. *See* PAR-VASO_0297182 at 190–91.


Dated: February 2, 2021



Kinam Park, Ph.D.

EXHIBIT B

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

PAR PHARMACEUTICAL, INC.,)	
PAR STERILE PRODUCTS, LLC, and)	
ENDO PAR INNOVATION)	
COMPANY, LLC,)	
)	C.A. No. 18-823-CFC
Plaintiffs,)	
)	
v.)	
)	
EAGLE PHARMACEUTICALS INC.,)	
)	
Defendant.)	

DEFENDANT'S STATEMENT OF ISSUES OF FACT
THAT REMAIN TO BE LITIGATED

TABLE OF CONTENTS

	<u>Page</u>
<u>I. BACKGROUND</u>	<u>3</u>
<u>A. Overview Of The Case</u>	<u>3</u>
<u>B. Unapproved Vasopressin Products</u>	<u>5</u>
<u>C. JHP’s NDA for Pitressin®</u>	<u>8</u>
<u>D. Par’s Original Vasostrict® Product</u>	<u>9</u>
<u>E. Par’s Reformulated Vasostrict® Product</u>	<u>11</u>
<u>F. Par’s Patents</u>	<u>13</u>
<u>1. ’239 Patent</u>	<u>13</u>
<u>2. ’526 Patent</u>	<u>15</u>
<u>3. ’209 and ’785 Patents</u>	<u>20</u>
<u>G. Eagle’s ANDA Product</u>	<u>25</u>
<u>II. EAGLE’S ANDA PRODUCT DOES NOT INFRINGE THE ASSERTED CLAIMS</u>	<u>26</u>
<u>A. Eagle’s ANDA Product Will Not Have a pH of 3.7 to 3.9</u>	<u>27</u>
<u>1. Eagle’s ANDA Precludes a pH of 3.7 to 3.9</u>	<u>28</u>
<u>2. Eagle’s ANDA Batch Data Do Not Show that Eagle’s ANDA Product Will Have a pH Outside of 3.4 to 3.6 During Its Shelf Life</u>	<u>28</u>
<u>3. Eagle’s Optimized Manufacturing Process for its Proposed Commercial Product Will Maintain pH at 3.4 to 3.6 During Its Shelf Life</u>	<u>34</u>
<u>III. THE ASSERTED CLAIMS OF THE PATENTS-IN-SUIT ARE UNENFORCEABLE FOR INEQUITABLE CONDUCT</u>	<u>51</u>
<u>A. Inequitable Conduct During Prosecution of the ’239 Patent</u>	<u>52</u>

<u>B.</u>	<u>Inequitable Conduct During Prosecution of the '239 Patent Renders the Patents-in-Suit Unenforceable.....</u>	<u>57</u>
<u>C.</u>	<u>The Named Inventors Committed Further Inequitable Conduct During Prosecution of the Patents-in-Suit</u>	<u>59</u>
<u>1.</u>	<u>The Inventors Withheld Material Information Regarding the Prior Art Pitressin® Formulation</u>	<u>59</u>
<u>2.</u>	<u>The Named Inventors Withheld from the PTO Normalized Impurity Data to Bolster Their Criticality Arguments.....</u>	<u>60</u>
<u>3.</u>	<u>The Named Inventors Withheld from the PTO Other Information Relevant to Criticality of the Claimed pH That Was Material to the Prosecution.....</u>	<u>62</u>
<u>IV.</u>	<u>THE ASSERTED CLAIMS OF THE PATENTS-IN-SUIT ARE INVALID</u>	<u>65</u>
<u>A.</u>	<u>All Asserted Claims Are Anticipated by Original Vasopressin® With Its Prescribing Information.....</u>	<u>65</u>
<u>B.</u>	<u>All Asserted Claims Are Obvious Over Original Vasopressin® With Its Prescribing Information.....</u>	<u>67</u>
<u>C.</u>	<u>The Asserted Claims of the '785 Patent Are Anticipated by Pitressin®</u>	<u>69</u>
<u>D.</u>	<u>All Asserted Claims Are Obvious over Pitressin®, Alone Or In Combination With Russell 2008, Intravenous Medications 2013, and WHO Standard</u>	<u>71</u>
<u>E.</u>	<u>All Asserted Claims Are Obvious Over The April 2014 Vasopressin® Label.....</u>	<u>73</u>
<u>F.</u>	<u>All Asserted Claims Are Obvious Over American Regent Vasopressin Injection, Alone Or In Combination With Russell 2008 and Intravenous Medications 2013.</u>	<u>75</u>
<u>G.</u>	<u>All Asserted Claims Are Obvious Over PPC, Alone Or In Combination With Russell 2008, Intravenous Medications 2013, and WHO Standard</u>	<u>77</u>

<u>H.</u>	<u>All Asserted Claims Lack Adequate Written Description</u>	<u>79</u>
<u>1.</u>	<u>'209 and '785 Patents.....</u>	<u>82</u>
<u>I.</u>	<u>All Asserted Claims Lack Adequate Enablement.....</u>	<u>83</u>
<u>1.</u>	<u>'209 and '785 Patents.....</u>	<u>85</u>
<u>J.</u>	<u>All Asserted Claims Are Indefinite.....</u>	<u>87</u>
<u>1.</u>	<u>When to Measure pH.....</u>	<u>88</u>
<u>V.</u>	<u>THIS CASE IS EXCEPTIONAL AND EAGLE SHOULD BE AWARDED ITS REASONABLE ATTORNEY FEES</u>	<u>88</u>
<u>A.</u>	<u>Par Lacked a Reasonable Basis to Bring and Maintain this Suit Against Eagle</u>	<u>88</u>
<u>B.</u>	<u>Par Brought this Suit in Bad Faith.....</u>	<u>94</u>
<u>C.</u>	<u>Par's Engaged in Inequitable Conduct to Procure the Patents-in-Suit</u>	<u>96</u>
<u>D.</u>	<u>Response to Par's Allegations in Paragraphs 271–279 of Par's Statement of Contested Facts.....</u>	<u>97</u>
<u>VI.</u>	<u>PAR IS NOT ENTITLED TO INJUNCTIVE OR MONETARY RELIEF.....</u>	<u>99</u>
I.	BACKGROUND.....	3
A.	Overview Of The Case	3
B.	Unapproved Vasopressin Products	5
C.	JHP's NDA for Pitressin®.....	8
D.	Par's Original Vasostriect® Product	9
E.	Par's Reformulated Vasostriect® Product.....	11
F.	Par's Patents	13
1.	'239 Patent	13

2. — '526 Patent	15
3. — '209 and '785 Patents	20
G. — Eagle's ANDA Product	25
H. — EAGLE'S ANDA PRODUCT DOES NOT INFRINGE THE ASSERTED CLAIMS	26
A. — Eagle's ANDA Product Will Not Have a pH of 3.7 to 3.9, or 3.8	27
1. — Eagle's ANDA Precludes a pH of 3.7 to 3.9, or 3.8	28
2. — Eagle's ANDA Batch Data Do Not Show that Eagle's ANDA Product Will Have a pH Outside of 3.4 to 3.6 During Its Shelf Life	28
3. — Eagle's Optimized Manufacturing Process for its Proposed Commercial Product Will Maintain pH at 3.4 to 3.6 During Its Shelf Life	34
4. — There is No Evidence That Eagle's ANDA Product Will Be Stored for Four Weeks at pH 3.8	<u>3837</u>
5. — Eagle's ANDA Product Will Not Be Used by a Single Entity to Practice the Claims of the '526 patent	<u>3938</u>
B. — Eagle's ANDA Product Will Not Meet the Claimed Degradation and Impurity Requirements	<u>4241</u>
1. — Eagle Will Not Induce Infringement of the Claimed Degradation and Impurity Requirements	<u>4241</u>
2. — Eagle's ANDA Does Not Establish Eagle's ANDA Product Will Meet the Claimed Degradation and Impurity Requirements	<u>4342</u>
3. — Eagle's ANDA Batch Data Do Not Show that Eagle's ANDA Product Will Exhibit "Less Than 1% Degradation" After Storage at 2–8°C For Four Weeks at pH 3.8	<u>4544</u>

4. Eagle's ANDA Batch Data Do Not Show that Eagle's ANDA Product Will Have the Specified Impurities.....	4645
III. THE ASSERTED CLAIMS OF THE PATENTS IN SUIT ARE UNENFORCEABLE FOR INEQUITABLE CONDUCT.....	5150
A. Inequitable Conduct During Prosecution of the '239 Patent....	5251
B. Inequitable Conduct During Prosecution of the '239 Patent Renders the Patents in Suit Unenforceable.....	5756
C. The Named Inventors Committed Further Inequitable Conduct During Prosecution of the Patents in Suit	5958
1. The Inventors Withheld Material Information Regarding the Prior Art Pitressin® Formulation	5958
2. The Named Inventors Withheld from the PTO Normalized Impurity Data to Bolster Their Criticality Arguments.....	6059
3. The Named Inventors Withheld from the PTO Other Information Relevant to Criticality of the Claimed pH That Was Material to the Prosecution.....	6261
IV. THE ASSERTED CLAIMS OF THE PATENTS IN SUIT ARE INVALID	6564
A. All Asserted Claims Are Anticipated by Original Vasostriet® With Its Prescribing Information.....	6564
B. All Asserted Claims Are Obvious Over Original Vasostriet® With Its Prescribing Information.....	6765
C. The Asserted Claims of the '785 Patent Are Anticipated by Pitressin®	6967
D. All Asserted Claims Are Obvious over Pitressin®, Alone Or In Combination With Russell 2008, Intravenous Medications 2013, and WHO Standard	7168
E. All Asserted Claims Are Obvious Over The April 2014 Vasostriet® Label.....	7370

F.	All Asserted Claims Are Obvious Over American Regent Vasopressin Injection, Alone Or In Combination With Russell 2008 and Intravenous Medications 2013.	7572
G.	All Asserted Claims Are Obvious Over PPC, Alone Or In Combination With Russell 2008, Intravenous Medications 2013, and WHO Standard	7774
H.	All Asserted Claims Lack Adequate Written Description	7976
	1. '526 Patent	7976
	2. '209 and '785 Patents	8279
I.	All Asserted Claims Lack Adequate Enablement	8380
	1. '526 Patent	8380
	2. '209 and '785 Patents	8582
J.	All Asserted Claims Are Indefinite	8784
	1. Less Than [X]% Degradation After Storage at 2-8°C for About Four Weeks	8784
	2. When to Measure pH	8885
V.	THIS CASE IS EXCEPTIONAL AND EAGLE SHOULD BE AWARDED ITS REASONABLE ATTORNEY FEES	8885
A.	Par Lacked a Reasonable Basis to Bring and Maintain this Suit Against Eagle	8885
B.	Par Brought this Suit in Bad Faith	9490
C.	Par's Engaged in Inequitable Conduct to Procure the Patents in Suit	9693
D.	Response to Par's Allegations in Paragraphs 271-279 of Par's Statement of Contested Facts	9794
VI.	PAR IS NOT ENTITLED TO INJUNCTIVE OR MONETARY RELIEF	9995

EXHIBIT 3

Pursuant to Local Rule 16.3(c)(4) and the Court’s Scheduling Order (D.I. 120, 148), Defendant Eagle Pharmaceuticals Inc. (“Eagle” or “Defendant”) submits this Statement of Issues of Fact that Remain to be Litigated (“Statement”). Eagle incorporates by reference any issues of fact set forth in its responsive papers to any comparable material filed or submitted by Plaintiffs Par Pharmaceutical, Inc., Par Sterile Products, LLC, and Endo Par Innovation Company, LLC (collectively, “Par” or “Plaintiffs”).

In this action, Plaintiffs are currently asserting ~~U.S. Patent No. 9,687,526 (“the ’526 patent”)~~; U.S. Patent No. 9,744,209 (“the ’209 patent”); and U.S. Patent No. 9,750,785 (“the ’785 patent”) (collectively, the “Patents-in-Suit”).¹ Specifically, Plaintiffs are asserting ~~claim 13 of the ’526 patent~~; claims 1, 3–5, and 7 of the ’209 patent; and claims 1, 4, 5, and 8 of the ’785 patent (the “Asserted Claims”).

Eagle reserves all rights with respect to these disclosures, including the right to amend, supplement, or otherwise modify these disclosures without prejudice according to the schedule set forth by the Parties for pre-trial exchanges, the local rules, the Federal Rules of Civil Procedure, and any other basis in fact or law. Eagle

¹ The Patents-in-Suit share two common inventors and a common chain of priority to U.S. Patent No. 9,744,239 (“the ’239 patent”), and therefore may be referred to as the “’239 family.” ~~Both~~Each of these patents also claims priority to U.S. Application 14/610,499. Par has not disputed that the Patents-in-Suit are not entitled to priority dates earlier than their own filing dates, based on their claims of priority to the ’239 patent and ’499 application.

reserves the right to affirmatively use, elaborate upon, or dispute any fact cited by Plaintiffs, including the scientific bases for such fact or Plaintiffs' application of such fact in this case.

By including a fact herein, Eagle does not assume the burden of proof or production with regard to that fact. For instance, Plaintiffs bear the burden of proof with respect to infringement. As such, Eagle reserves the right to object to and/or contest those alleged facts and present any and all rebuttal evidence in response to those alleged facts when identified by Plaintiffs. Any fact not specifically admitted in the parties' Statement of Uncontested Facts should be considered contested, even if not specifically enumerated herein.

To the extent Eagle's Statement of Issues of Law that Remain to be Litigated contains issues of fact, those issues are incorporated herein by reference. If the Court determines that any issue identified in this list as an issue of fact is more properly considered an issue of law, Eagle incorporates such issue by reference into its Statement of Issues of Law. Eagle incorporates by reference its expert reports in support of any proof to be presented by expert testimony. To the extent that a fact or an issue of fact in one section applies to another section, claim or theory, it is incorporated therein as well without separate repetition. Eagle incorporates by reference the Statement of Uncontested Facts.

I. BACKGROUND

A. Overview Of The Case

1. This is a patent infringement action arising under the patent laws of the United States (35 U.S.C. §§ 100 *et seq.*) and the Hatch-Waxman Act (21 U.S.C. § 355) based on Eagle's filing of Abbreviated New Drug Application No. 211538 ("Eagle's ANDA") seeking approval to commercially manufacture, use, offer to sell, and sell in the United States a generic version of Par's original Vasostrict® product as approved by the FDA in April 2014 ("Original Vasostrict®").

2. Each of the Patents-in-Suit is listed in the FDA publication titled "Approved Drugs With Therapeutic Equivalence Evaluations" (the "Orange Book") as covering Vasostrict®. The Orange Book additionally lists U.S. Patent Nos. 9,744,239 (the "'239 patent"), 9,375,478 (the "'478 patent"), [U.S. Patent No. 9,687,526](#) ("the '526 patent"), and 9,937,223 (the "'223 patent") as covering Vasostrict®.

3. Every claim of the '526, '209, '785, '223 and '478 patents requires vasopressin formulations with a pH value within the range of 3.7–3.9. The '239 patent, in contrast, requires vasopressin formulations with a pH within the broader range of 3.5–4.1. Additionally, the '478 and '223 patents (collectively, the "Buffer Patents") are directed to vasopressin formulations that include an "acetate buffer."

4. On April 16, 2018 and May 18, 2018, Eagle sent Paragraph IV notice letters informing Par that Eagle intended to market its ANDA Product before the expiration of the '239, '526, '209, '785, '223 and '478 patents, that Eagle's ANDA product and its use upon approval would not infringe any valid, enforceable claim of those patents, and that the claims of those patents are invalid. Among other noninfringement bases, Eagle informed Par that it will not infringe the '526, '209, '785, '223 and '478 patents because its ANDA specifications require a pH of 3.4–3.6 throughout the shelf life of its ANDA product, whereas each of these patents requires vasopressin formulations with a pH value within the range of 3.7–3.9. Eagle also informed Par that its ANDA Product will not contain an “acetate buffer,” and therefore will not infringe the Buffer Patents.

5. Nevertheless, on May 31, 2018, Par filed a complaint against Eagle (the “Complaint”) asserting infringement of the '239, '526, '209, '785, '478, and '223 patents. On August 6, 2018, Eagle filed its answer to Par's Complaint, asserting counterclaims of noninfringement and invalidity of the '239, '526, '209, '785, '478, and '223 patents.

6. On October 30, 2019, Eagle filed an amended answer and counterclaims to Par's Complaint to add counterclaims of inequitable conduct with respect to the '239, '526, '209, and '785 patents, including based on the filing of false declarations during prosecution of the '239 patent that also tainted the

prosecution of the '526, '209, and '785 patents, as discussed further in Section II below.

7. In response to Eagle's inequitable conduct counterclaims, on November 11, 2019, Par moved to dismiss the '239 patent. In the same motion, Par also moved to dismiss the Buffer Patents, after several of its named inventors confirmed at their depositions that the acetic acid in the original Vasostriect® formulation, and therefore in Eagle's ANDA Product, does not act as an "acetate buffer."

8. On December 20, 2019, the parties stipulated to dismissal of all claims, counterclaims, and defenses related to the '239 patent and the Buffer Patents. With the dismissal of the '239 patent, no patent remains in this action that covers Eagle's ANDA Product's pH of 3.4–3.6.

B. Unapproved Vasopressin Products

9. Since the institution of the FDA drug approval process in 1938, manufacturers have been permitted to continue to market drug products that existed before the FDA approval process was instituted, so-called "grandfathered" products. In order to maintain such grandfathered status, the composition and conditions of use on a product's labeling must remain unchanged.

10. Stable vasopressin formulations, under the trade name Pitressin®, were sold as unapproved products for almost a century with the same identified

formulation: 20 units/mL or 0.038 mg/mL of vasopressin, [REDACTED] mg/mL of chlorobutanol, acetic acid for pH adjustment to pH 3.4 to 3.6 (approximately 0.22 mg per mL of solution), and water for injection.

11. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

12. For decades, Pitressin® and other vasopressin products were used to treat hypotension, including vasodilatory and septic shock, as reflected in references such as A. Russell et al., *Vasopressin versus Norepinephrine Infusion in Patients with Septic Shock*, N. Eng. J. Med. 358(9):877-87 (2008) (“Russell 2008”) and standard guidelines such as *Intravenous Medications* (B. L. Gahart & A. R. Nazareno et al., eds. 29th ed. 2013) (“Intravenous Medications 2013”).

13. Pitressin® was sold from at least 1927 until 2014 by Par and its predecessors, including Parke-Davis, King Pharmaceuticals, Parkedale, and finally JHP Pharmaceutical (“JHP”). JHP was acquired by Par Pharmaceutical Inc. in February 2014, after which its name was changed to Par Sterile Products, LLC. Par Sterile Products is one of the Plaintiffs in this action.

14. Pitressin® was labeled with a shelf life of 24 months at room temperature.

15. Although the release and stability specifications for JHP's unapproved Pitressin® were pH 2.5 to 4.5, the in-process pH range for Pitressin® during manufacture was [REDACTED] The Pitressin® label did not indicate the pH of the formulation.

16. Release testing of JHP's unapproved Pitressin® product demonstrated that some lots were released at a pH between [REDACTED]

17. Stability testing of JHP's unapproved Pitressin® product demonstrated that some lots increased their pH during their shelf lives to a pH between [REDACTED]
[REDACTED]

18. Other unapproved vasopressin products with the same formulation as Pitressin® were sold by companies including Fresenius Kabi, Pharmaceutical Partners of Canada ("PPC"), and Cardinal Health. The labels for these products either did not specify the pH of the product or included only the stability specification range of 2.5 to 4.5.

19. Other companies sold unapproved vasopressin products with slightly different formulations. For example, American Regent (formerly Luitpold Pharmaceuticals) sold an unapproved vasopressin product from at least 1996–2012

comprising the same concentration of vasopressin and chlorobutanol as Pitressin®, but with pH adjustment to [REDACTED] and the addition of sodium chloride.

20. Standards for unapproved vasopressin products were set by the United States Pharmacopeia (USP), with a pH range of 2.5 to 4.5. The World Health Organization (WHO) also provided a standard for an aqueous vasopressin formulation for analysis of vasopressin drug products (“WHO Standard”). That WHO Standard required refrigeration of aqueous vasopressin formulations for maximum stability.

C. JHP’s NDA for Pitressin®

21. In 2006, the FDA issued guidance encouraging companies to file New Drug Applications (“NDAs”) on products that were sold as unapproved products. This guidance was updated on September 19, 2011 to clarify the FDA’s enforcement priorities with respect to unapproved products and their removal from the market.

22. [REDACTED]

[REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

24. [REDACTED]

[REDACTED]

[REDACTED]

25. On September 25, 2012, JHP filed its NDA No. 204485 for its Pitressin® product. The proposed formulation was identical to that of its prior unapproved formulation except for the removal of overages.

26. JHP did not conduct any clinical studies to support its NDA, instead relying on the published literature, such as Russell 2008, standard reference guides, and known treatment algorithms to show the effectiveness of Pitressin® in treating hypotension, including in vasodilatory and septic shock.

27. With its NDA, JHP submitted stability data for three registration batches of Pitressin® without overages: 310571, 310573, and 310574.

28. Lot 310571 had a pH of 3.8 after upright and inverted storage for 18 months under refrigeration. This pH result was recorded 23 months after the manufacture of this batch and thus within its 24-month refrigerated shelf life.

D. Par's Original Vasostrict® Product

29. The FDA approved JHP's NDA No. 204485 for Pitressin®, renamed "Vasostrict®," on April 17, 2014 ("Original Vasostrict®")

30. The formulation of Original Vasostrict® was identical to that of unapproved Pitressin® without the overages of vasopressin and chlorobutanol,

comprising 20 units/mL or 0.0377 mg/mL vasopressin, 0.5% or ■ mg chlorobutanol, acetic acid for pH adjustment to 3.4 to 3.6, and water for injection.

31. At the same time, the FDA approved the prescribing information for original Vasostrict® (“April 2014 Vasostrict® Label”). That label identified the formulation of Original Vasostrict®, including its manufacture pH of 3.4–3.6. The label also included the indications as well as dosage and administration instructions for treatment of hypotension, including vasodilatory shock, post-cardiotomy shock and septic shock.

32. Soon after the initial approval of Original Vasostrict®, in September 2014, the FDA approved new prescribing information, adding a refrigerated storage instruction (“Store between 2°C and 8°C (36°F and 46°F). Do not freeze.”) (“September 2014 Vasostrict® Label”).

33. Original Vasostrict® was first sold by Par in November 2014 with the September 2014 Original Vasostrict® Label.

34. In May 2015, the FDA approved new prescribing information for Original Vasostrict®, which permitted storage of the product for up to twelve months at room temperature or 24 months refrigerated (“March 2015 Vasostrict® Label”).

35. Original Vasostrict® was sold with the March 2015 Vasostrict® Label from May 2015.

36. Although the target pH for Original Vasopressin® was 3.4–3.6, it had a release pH specification of 3.5–4.0, and a shelf life stability specification of 2.5–4.5.

37. Original Vasopressin® was indicated for the treatment of hypotension, including vasodilatory shock from post-cardiotomy shock and septic shock. Original Vasopressin®'s prescribing information contained instructions for intravenous administration at a dose between 0.01 and 0.07 units/minute to treat hypotension including vasodilatory shock from post-cardiotomy shock and septic shock.

38. The FDA removed other vasopressin products from the market in December 2014, following the initial approval and commercial launch of Original Vasopressin®. At that time, Original Vasopressin® became the only vasopressin product available in the United States.

39. Since the removal of Par's competitors in December 2014, no other manufacturer has marketed a vasopressin product in the United States. During this time, Par has held a monopoly on vasopressin. As a result, Par increased the price of vasopressin from less than five dollars per vial to over one hundred thirty dollars per vial.

E. Par's Reformulated Vasopressin® Product

40. Although competing vasopressin products were removed from the market, the NDA for Original Vasopressin® was not eligible for any regulatory

exclusivity. Without any exclusivity, competitors were free to file their own NDAs or ANDAs to seek approval for competing vasopressin products. Only by listing patents in the Orange Book could Par forestall FDA approval and commercial launch of competitors' products.

41. Given that Par's Original Vasostrict® product was substantively identical to the prior art Pitressin® product that had been sold for almost a century, Par knew that it could not maintain exclusivity for its Original Vasostrict® product for long, as any patent covering the formulation of Original Vasostrict® would necessarily be invalid.

42. Therefore, although Original Vasostrict® had been approved by the FDA and had acceptable stability, Par began to look for ways that it could justify a new formulation of Vasostrict® that could be patented.

43. On March 21, 2016, Par received approval for a new formulation of Vasostrict® ("Reformulated Vasostrict®").

44. The only changes Par made to the formulation were: (1) changing the target pH from 3.4–3.6 to 3.8; (2) removing chlorobutanol; and (3) adding an acetate buffer.

45. Par sought and received the same shelf life for the Reformulated Vasostrict® as was already approved for the Original Vasostrict®.

46. Although Reformulated Vasostrict® has a target pH of 3.8, its release pH specification is 3.6–4.0 and its shelf-life stability pH specification is 2.5 to 4.5.

47. The storage and handling instructions for Reformulated Vasostrict® are the same as for Original Vasostrict®.

48. The dosage and administration section of the prescribing information for Reformulated Vasostrict® is the same as for Original Vasostrict®.

49. The FDA has confirmed that Original Vasostrict® was not removed from the market for safety or efficacy reasons. Par and the named inventors on the Patents-in-Suit could not identify any safety or efficacy advantage of Reformulated Vasostrict® compared to Original Vasostrict®.

F. Par's Patents

1. '239 Patent

50. The Patents-in-Suit each claim priority to the '239 patent, which issued on August 29, 2017 based on an application filed on May 20, 2015. The '239 patent names Vinayagam Kannan and Matthew Kenney as inventors. The Examiner of the '239 patent was Christine Bradley.

51. During prosecution of the '239 patent, Examiner Bradley issued a Final Office Action on October 21, 2015, rejecting all pending claims as both anticipated and obvious over the April 2014 Vasostrict® Label.

52. Instead of amending the claims, the inventors sought to overcome Examiner Bradley's Final Rejection by invoking the prior art exception of 35 U.S.C. § 102(b)(1)(A), which provides in relevant part that disclosures made 1 year or less before the effective filing date of the claimed invention shall not be prior art, "if the disclosure was made by the inventor or joint inventor or by another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor."

53. During a November 24, 2015 Applicant-Initiated Interview, the inventors' prosecuting attorney, Mr. Craig Kenesky, represented that the named inventors were "responsible for all of the subject matter in the FDA reference [(the April 2014 Vasostrict® Label)]" and would be able to make an "unequivocal" statement to that effect.

54. To that end, the inventors submitted two declarations, one from named inventor Vinayagam Kannan, and one from regulatory employee Michelle Bonomi-Huvala. Mr. Kannan declared under penalty of perjury that he and named co-inventor Matthew Kenney invented all of the subject matter of the April 2014 Vasostrict® Label that Examiner Bradley had relied upon to reject the claims. Ms. Bonomi-Huvala declared that the subject matter of the April 2014 Vasostrict® Label that Examiner Bradley had relied upon to reject the claims had been received from

named inventors Kannan and Kenney, and sent on to the FDA, who published the April 2014 Vasostrict® Label.

55. The Kannan and Bonomi-Huvala declarations were submitted by Mr. Kenesky to the U.S. Patent & Trademark Office (“PTO”) with a Response to Final Rejection on November 24, 2015, in which he represented that the declarations “describe[] that the disclosure of the [April 2014 Vasostrict® Label] was obtained from the inventors of the present application,” and that therefore the April 2014 Vasostrict® Label:

is not prior art under 35 U.S.C. § 102(a)(1) against the present invention based on the exception of 35 U.S.C. § 102(b)(1)(A). The disclosure was made by another (the FDA) less than one year before the effective filing date of the claimed invention. The FDA obtained the subject matter of the Label from the regulatory team at PAR STERILE, who received the subject matter from the inventors of the present application. Thus, the Label satisfies the provisions of 35 U.S.C. § 102(b)(1)(A). Applicant respectfully requests withdrawal of the rejection because the claims have not been rejected over any eligible prior art.

56. Based on these representations, Examiner Bradley withdrew the final rejection of the pending claims over the April 2014 Vasostrict® Label on January 11, 2016. Examiner Bradley never again raised the April 2014 Vasostrict® Label as prior art against the ’239 patent or any of the subsequently filed Patents-in-Suit.

2. ’526 Patent

57. The application that issued as the ’526 patent was filed on October 10, 2016 as a continuation-in-part of the application for the ’239 patent. This was after

Examiner Bradley had disqualified the April 2014 Vasostrict® Label as prior art, and after the approval and marketing of Par's Reformulated Vasostrict® product. Like the '239 patent, the '526 patent also names Vinayagam Kannan and Matthew Kenney as inventors, as well as two other Par employees, Sunil Vandse and Suketu Sanghvi. Like the '239 patent, the '526 patent was examined by Examiner Bradley.

58. Like the '239 patent, the claims of the '526 patent are directed to the use of a vasopressin composition comprising between 0.01 and 0.07 mg/mL vasopressin, acetic acid, and water at a dose of between 0.01 and 0.1 units per minute to increase blood pressure in a hypotensive human. The '526 patent does not recite the same pH range as the '239 patent, but rather claims a specific pH within the range claimed by the '239 patent.

59. Because the inventors had already represented that Vinayagam Kannan and Matthew Kenney had invented the subject matter of April 2014 Vasostrict® Label, Examiner Bradley would have understood that she could not raise the April 2014 Vasostrict® Label as prior art against the application for the '526 patent, on which Kannan and Kenney were both also named inventors.

60. Therefore, Examiner Bradley identified the closest prior art as the label from the unapproved vasopressin formulation sold by Pharmaceutical Partners of Canada (PPC), which identified only the broad pH range of 2.5–4.5 and did not include indications for hypotension.

61. Examiner Bradley entered a final rejection of the pending claims over the PPC reference in view of additional prior art, stating that PPC disclosed the same formulation as that recited by the pending claims of the '526 patent, with the same vasopressin concentration, acetic acid, and water, and an overlapping pH range of 2.5 to 4.5. In subsequent communications, the inventors did not dispute that PPC disclosed such a formulation.

62. Regarding storage, Examiner Bradley stated that it would have been obvious to refrigerate the formulation disclosed in PPC, as had been widespread in the art for a number of other peptide pharmaceutical products. In subsequent communications, the inventors did not dispute that it would have been obvious to refrigerate the formulation of PPC.

63. Examiner Bradley also stated that the formulation of PPC, by virtue of overlapping with that of the claims, inherently satisfied the percent degradation limitation. In subsequent communications, the inventors did not dispute that PPC inherently met the percent degradation over storage limitation.

64. Finally, Examiner Bradley stated that it would have been obvious in view of a number of clinical literature references to administer the formulation disclosed by PPC to treat hypotension in the manner claimed. Among those clinical references was Russell 2008. In subsequent communications, the inventors did not

dispute that it would have been obvious to administer the formulation of PPC to practice the method of treatment limitations.

65. Following the rejection, the inventors held an interview with Examiner Bradley, during which they agreed to add a limitation requiring a pH of 3.8.

66. To that end, the inventors filed amended claims that added the pH 3.8 limitation. Those claims are the ones that ultimately issued, ~~including claim 13~~ asserted here.

67. The inventors' primary argument to overcome Examiner Bradley's rejection over PPC was that the claimed pH of 3.8 was critical to stability of a vasopressin formulation.

68. Relying on declarations disclosing testing data from named inventors Vinayagam Kannan and Sunil Vandse (the "Criticality Declarations"), the inventors argued that pH 3.8 exhibited unexpected stability within the pH range of 2.5 to 4.5 disclosed in PPC.

69. To make that representation, the Criticality Declarations relied on pH-dependent stability testing that allegedly showed that pH 3.8 had the lowest level of impurities after storage for four weeks at 25 °C and 40 °C. Although other pH levels demonstrated lower relative levels of vasopressin degradation under those storage conditions, the inventors argued that vasopressin formulations were most stable at pH 3.8 in view of those impurities levels.

70. Examiner Bradley accepted this argument based on the alleged critical stability of pH 3.8 and allowed the claims. This was the only reason cited by Examiner Bradley in her Notice of Allowance.

~~71. Par asserts claim 13 of the '526 patent against Eagle. Claim 13 of the '526 patent depends from claim 1.~~

~~72. Claim 13 of the '526 patent, through its dependency on claim 1, recites:~~

~~1. A method of increasing blood pressure in a human in need thereof, the method comprising:~~

~~a) providing a pharmaceutical composition for intravenous administration comprising: i) from about 0.01 mg/mL to about 0.07 mg/mL of vasopressin or a pharmaceutically acceptable salt thereof; ii) acetic acid; and iii) water,~~

~~wherein the pharmaceutical composition has a pH of 3.8;~~

~~b) storing the pharmaceutical composition at 2-8°C. for at least 4 weeks; and~~

~~c) intravenously administering the pharmaceutical composition to the human, wherein the administration provides to the human from about 0.01 units of vasopressin or the pharmaceutically acceptable salt thereof per minute to about 0.1 units of vasopressin or the pharmaceutically acceptable salt thereof per minute, wherein the human is hypotensive,~~

~~wherein the pharmaceutical composition exhibits less than about 5% degradation after storage at 2-8°C. for about four weeks.~~

~~13. The method of claim 1, wherein the pharmaceutical composition exhibits less than 1% degradation after storage at 2-8°C. for about four weeks.~~

~~73. Although the '526 patent claims priority to several earlier applications,~~

~~Par has not disputed that those earlier applications do not adequately support asserted~~

~~claim 13 of the '526 patent. The earliest effective filing date of asserted claim 13 of the '526 patent is therefore October 10, 2016.~~

3. '209 and '785 Patents

~~74.~~71. The applications that issued as the '209 and '785 patents were both filed on February 17, 2017 as continuations-in-part of the application for '526 patent and, by extension, continuations-in-part of the application for the '239 patent. This was after Examiner Bradley had disqualified the April 2014 Vasostrict® Label as prior art during prosecution of the '239 patent, and after the approval and marketing of Par's Reformulated Vasostrict® product. Like the '526 patent, the '209 and '785 patents also name Vinayagam Kannan, Matthew Kenney, Sunil Vandse, and Suketu Sanghvi as inventors. Like the '239 and '526 patents, the '209 and '785 patents were examined by Examiner Bradley.

~~75.~~72. The claims of the '209 patent are similarly directed to the use of vasopressin formulations comprising between 0.01 and 0.07 mg/mL vasopressin at a dose of between 0.01 and 0.1 units/minute to raise blood pressure in hypotensive human. The '209 patent recites a pH range of 3.7 to 3.9 for those vasopressin formulations, broader than the pH limitation of the '526 patent but within the range of the '239 patent.

~~76.~~73. The claims of the '785 patent are directed to the compositions of vasopressin used in the methods of the '209 patent.

~~77.~~74.As with the '526 patent, Examiner Bradley also rejected the pending claims of the '209 and '785 patents over PPC, finding, as she did during prosecution of the '526 patent, that PPC disclosed a formulation with the same vasopressin levels as claimed. She also stated that it would have been obvious to administer that formulation to practice the claimed method according to the '209 patent claims.

~~78.~~75.Examiner Bradley also noted that the pH range recited by the applications for the '209 and '785 patents was encompassed by the pH range of 2.5 to 4.5 in PPC and therefore presumptively obvious.

~~79.~~76.In rejecting the claims over PPC, Examiner Bradley cited the April 2014 Vasostrict® Label as an “evidentiary reference,” making clear to the inventors that the April 2014 Vasostrict® Label need not be “prior art” to be used to provide evidence supporting her analysis of PPC. This confirms that Examiner Bradley understood that she could not raise the April 2014 Vasostrict® Label as prior art against the applications for the '209 and '785 patents due to the declarations submitted during prosecution of the '239 patent, as Kannan and Kenney were both also named inventors.

~~80.~~77.As to impurities, Examiner Bradley found that all such limitations, including those directed to levels of specific impurities found in the dependent claims, were the inherent results of the formulation and therefore disclosed by the PPC formulation. In a subsequent interview, the inventors proposed the current

impurities limitations to distinguish that prior art. Examiner Bradley rejected the inventors' reasoning and concluded that the limitation was still satisfied by PPC's formulation by inherency. The inventors did not dispute that subsequent conclusion.

~~81.~~78.In response to Examiner's Bradley's rejections, the inventors adopted the limitations of the Asserted Claims, including the related impurities limitations, despite the Examiner Bradley's rejection of them in the interview, and a pH of 3.7–3.9.

~~82.~~79.The inventors did not dispute any of Examiner Bradley's findings regarding the PPC reference. Rather, as they had done during the prosecution of the '526 patent, the inventors argued that pH was critical to the Asserted Claims over the range of pH 2.5 to 4.5. Instead of pH 3.8 being critical, as in the '526 patent, the inventors argued that a pH range of 3.7 to 3.9 as recited by the '209 and '785 patent was critical to the stability of vasopressin formulations and exhibited unexpected results over the prior art.

~~83.~~80.In lieu of submitting inventor declarations as in the '239 patent and '526 patent prosecutions, the inventors directed Examiner Bradley to the same data and conclusions from the Criticality Declarations that has been incorporated into

Examples 9 and 10 of the '209 and '785 patents' specifications.² Relying on that same data, the inventors represented to Examiner Bradley that pH 3.7 to 3.9—not just pH 3.8—demonstrated unexpectedly lower impurity levels than, and at least comparable vasopressin degradation levels to, other pH levels in PPC's range.

~~84.~~81.Par asserts claims 1, 3, 4, 5, and 7 of the '209 patent, which require:

1. A method of increasing blood pressure in a human in need thereof, the method comprising administering to the human a unit dosage form, wherein the unit dosage form comprises from about 0.01 mg/mL to about 0.07 mg/mL of vasopressin or a pharmaceutically acceptable salt thereof, wherein: the unit dosage form has a pH of 3.7-3.9; the unit dosage form further comprises impurities that are present in an amount of 0.9% - 1.7%, wherein the impurities have from about 85% to about 100% sequence homology to SEQ ID NO.: 1³; the administration provides to the human from about 0.01 units of vasopressin or the pharmaceutically-acceptable salt thereof per minute to about 0.1 units of vasopressin or the pharmaceutically-acceptable salt thereof per minute; and the human is hypotensive.

3. The method of claim 1, wherein the impurities comprise SEQ ID NO.: 3,⁴ and SEQ ID NO.: 3 is present in the unit dosage form in an amount of 0.1% .

4. The method of claim 1, wherein the impurities comprise SEQ ID NO.: 4,⁵ and SEQ ID NO.: 4 is present in the unit dosage form in an amount of 0.2% to 0.4%.

² The data in the Criticality Declarations were also incorporated into the specification of the '526 patent as Examples 9 and 10, but the inventors resubmitted the Declarations themselves in the '526 patent prosecution.

³ "SEQ ID NO.: 1" refers to the vasopressin compound.

⁴ "SEQ ID NO.: 3" refers to Asp5-vasopressin compound, a related impurity.

⁵ "SEQ ID NO.: 4" refers to Glu4-vasopressin compound, a related impurity.

5. The method of claim 1, wherein the impurities comprise SEQ ID NO.: 7,⁶ and SEQ ID NO.: 7 is present in the unit dosage form in an amount of 0.3% to 0.6%.

7. The method of claim 1, wherein the impurities comprise SEQ ID NO.: 2⁷ and SEQ ID NO.: 4, and SEQ ID NO.: 2 is present in the unit dosage form in an amount of 0.1% to 0.3% and SEQ ID NO.: 4 is present in the unit dosage form in an amount of 0.2% to 0.4%.

~~85.~~82. Par asserts claims 1, 4, 5, and 8 of the '785 patent, which require:

1. A pharmaceutical composition comprising, in a unit dosage form, from about 0.01 mg/mL to about 0.07 mg/mL of vasopressin or a pharmaceutically-acceptable salt thereof, wherein the unit dosage form further comprises impurities that are present in an amount of 0.9% to 1.7%, wherein the impurities have from about 85% to about 100% sequence homology to SEQ ID NO.: 1, and wherein the unit dosage form has a pH of 3.7-3.9.

4. The pharmaceutical composition of claim 1, wherein the impurities comprise SEQ ID NO.: 3, and SEQ ID NO.: 3 is present in the unit dosage form in an amount of 0.1%.

5. The pharmaceutical composition of claim 1, wherein the impurities comprise SEQ ID NO.: 4, and SEQ ID NO.: 4 is present in the unit dosage form in an amount of 0.2% to 0.4%.

8. The pharmaceutical composition of claim 1, wherein the impurities comprise SEQ ID NO.: 2 and SEQ ID NO.: 4, and SEQ ID NO.: 2 is present in the unit dosage form in an amount of 0.1% to 0.3% and SEQ ID NO.: 4 is present in the unit dosage form in an amount of 0.2% to 0.4%.

~~86.~~83. Although the '209 and '785 patents claim priority to several earlier applications, Par has not disputed that those earlier applications do not adequately

⁶ “SEQ ID NO.: 7” refers to Acetyl-vasopressin compound, a related impurity.

⁷ “SEQ ID NO.: 2” refers to Gly9-vasopressin compound, a related impurity.

support the Asserted Claims of those patents. The earliest effective filing date of the Asserted Claims of the '209 and '785 patents is therefore February 17, 2017.

G. Eagle's ANDA Product

~~87.~~84. The FDA has confirmed that Par's Original Vasostrict® formulation "was not discontinued from sale for reasons of safety or effectiveness," and that the FDA will "receive ANDAs that refer to Vasostrict as the RLD and propose to duplicate the original formulation of Vasostrict, 20 units per mL, and FDA may approve such ANDAs, as long as all other requirements are met."⁸

~~88.~~85. To that end, Eagle's ANDA identifies Par's Original Vasostrict® formulation as the reference listed drug. In other words, Eagle's ANDA Product has the same formulation as Original Vasostrict®. As such, the FDA has rated it Q1/Q2 against original Vasostrict®, meaning it is both qualitatively and quantitatively the same. Because of the Q1/Q2 designation, bioequivalence testing, which is typically required for generic drugs to receive ANDA approval, was waived for Eagle's ANDA product.

~~89.~~86. The prescribing instructions for Eagle's ANDA Product are substantively identical to the March 2015 Vasostrict® Label, except for the change in product name.

⁸ DTX-258 (FDA, Dkt. No. FDA-2017-P-1096, Response to Citizen's Petition at 4-5 (Dec. 21, 2018)).

~~90.~~87. Although Eagle's ANDA Product is Q1/Q2 to Original Vasostrict®, Eagle's ANDA has a narrower release specification for pH, and a narrower stability specification for both pH and impurities, as compared to Original Vasostrict®.

~~91.~~88. Par has accused Eagle's ANDA product and its prescribing information of infringing each of the Asserted Claims of the Patents-in-Suit.

~~92.~~89. For the pH limitations, Par relies on a single out-of-specification result for one registration batch under one storage condition at the 24 month time period.

II. EAGLE'S ANDA PRODUCT DOES NOT INFRINGE THE ASSERTED CLAIMS

~~93.~~90. Plaintiffs have not carried their burden of proving that Eagle's ANDA Product, or use thereof, can and/or will meet each and every limitation of the Asserted Claims of the Patents-in-Suit.

~~94.~~91. Claims ~~13 of the '526 patent and claims~~ 1, 3–5, and 7 of the '209 patent are all method of treatment claims. Eagle does not and will not treat patients with its ANDA Product. Eagle therefore does not and will not infringe ~~claim 13 of the '526 patent and~~ claims 1, 3–5, and 7 of the '209 patent directly.

~~95.~~92. A physician's use of Eagle's ANDA Product according to the associated prescribing information ("Eagle's Label") will not infringe ~~claim 13 of the '526 patent or~~ claims 1, 3–5, and 7 of the '209 patent, because such use will not involve performing the recited method steps using the compositions recited in the claims.

~~96. The method steps of claim 13 of the '526 patent are not attributable to a single entity having direction and control over all actors performing the method steps, nor are the method steps attributable to a joint enterprise.~~

~~97.~~93. Eagle will not induce infringement of ~~claim 13 of the '526 patent or~~ claims 1, 3–5, and 7 of the '209 patent because Eagle will not promote, encourage, or recommend performance of the recited method steps using the compositions recited in the claims.

~~98.~~94. Claims 1, 4, 5, and 8 of the '785 patent are all composition claims. Eagle does not and will not make, use, sell, offer to sell, or import the compositions recited in claims 1, 4, 5, and 8 of the '785 patent. Eagle therefore does not and will not infringe claims 1, 4, 5, and 8 of the '785 patent directly.

~~99.~~95. Eagle does not and will not induce infringement of claims 1, 4, 5, and 8 of the '785 patent because Eagle does not and will not promote, encourage, or recommend the making, use, sale, offer for sale, or importation of the compositions recited in the claims.

A. Eagle's ANDA Product Will Not Have a pH of 3.7 to 3.9, ~~or 3.8~~

~~100.~~96. Eagle's ANDA specifications require that Eagle's ANDA Product have a pH between 3.4 and 3.6 throughout its entire proposed shelf life, not 3.7 to 3.9, ~~or 3.8~~, as required by the Asserted Claims of the Patents-in-Suit.

1. Eagle's ANDA Precludes a pH of 3.7 to 3.9, ~~or 3.8~~

~~101.97.~~97. Eagle's Label for its ANDA Product, which is substantively identical to the March 2015 Vasostrict® Label except for the change in product name, describes Eagle's ANDA Product as adjusted with acetic acid to a pH of between 3.4 and 3.6.

~~102.98.~~98. Eagle's ANDA specification for release requires Eagle's ANDA Product to have an initial pH of between 3.4 and 3.6 when released from manufacturing.

~~103.99.~~99. Eagle's ANDA specification for stability requires the pH of Eagle's ANDA Product to be within the range of 3.4 to 3.6 during the entire proposed shelf life. The proposed shelf life of Eagle's ANDA Product is 24 months refrigerated storage (2–8°C), with up to 12 months storage at room temperature (25°C) after removal from refrigerated storage, or until manufacturer expiry, whichever is earlier.

2. Eagle's ANDA Batch Data Do Not Show that Eagle's ANDA Product Will Have a pH Outside of 3.4 to 3.6 During Its Shelf Life

~~104.100.~~100. As part of its application for FDA approval to market a generic version of Par's original Vasostrict® product, Eagle, in conjunction with Albany Molecular Research Inc. ("AMRI"), commissioned the manufacture of nine batches of its proposed ANDA Product: three registration batches, SVA001–003,

manufactured in March 2017; three characterization batches, SVA004–006, manufactured in March and April 2019; and three process optimization batches, SVA007–009, manufactured in July and August 2019.

~~105.~~101. Batches SVA001–009 were each put on stability under the labeled storage conditions Eagle has proposed for its ANDA Product, which is 24 months refrigerated storage (2–8°C), with up to 12 months storage at room temperature (25°C) after removal from refrigerated storage, or until manufacturer expiry, whichever is earlier.

~~106.~~102. The first three batches manufactured, SVA001–003, were stored both upright and inverted for (i) 24 months at refrigerated storage (5°C), (ii) 12 months at room temperature (25°C), and (iii) 21 months at refrigerated storage followed by 7.5 months at room temperature. In total, pH measurements were obtained at ~~40-~~37 time points for each of these batches.

~~107.~~103. Of the pH measurements obtained for SVA001 under the labeled storage conditions Eagle has proposed for its ANDA Product, only at one of ~~40-~~37 time points (24 months upright, refrigerated storage) did Eagle’s ANDA Product fall outside of the range required by Eagle’s Label and ANDA stability specification:

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001 Upright Position, DOM: 03Mar2017										
Long Term (2° to 8°C) Stability Data, Stability Protocol PD SVA-01 Rev05										
Test	Specification	Test Method	Initial†	1 M†	3 M†	6 M†	9 M†	12 M†	18 M†	24 M
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	NS	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms
pH	3.4 – 3.6	STA-EPX-0119	3.6	NS	3.4	3.6	3.6	3.6	3.6	3.7, 3.8, 3.7 PR661354

DTX-121 at EAGLEVAS0047276.

~~108.~~104. This *single* out-of-specification result from Eagle's ANDA batch does not demonstrate or support infringement by a preponderance of the evidence, as it does not demonstrate that it is more likely than not that the pH of Eagle's ANDA Product will deviate into the claimed range.

~~109.~~105. First, this out-of-specification result was obtained at the end of the product shelf life, when the product would neither be sold to customers nor administered to a patient.

~~110.~~106. Second, every other pH measurement at every other time point for SVA001 in upright position had a pH within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification, demonstrating that the out-of-specification result was an anomaly.

~~111.~~107. Each pH measurement obtained for batch SVA001 stored inverted under refrigerated storage fell within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification:

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001 Inverted Position, DOM: 03Mar2017 Long Term (2° to 8°C) Stability Data, Stability Protocol PD SVA-01 Rev05										
Test	Specification	Test Method	Initial†	1 M†	3 M†	6 M†	9 M†	12 M†	18 M†	24 M
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms
pH	3.4 – 3.6	STA-EPX-0119	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6

DTX-121 at EAGLEVAS0047274.

~~112.~~108. Each pH measurement obtained for batch SVA001 stored for 12 months at room temperature fell within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification:

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001 Inverted Position, DOM: 03Mar2017 25°C/60%RH, Stability Data, Stability Protocol PD SVA-01 Rev05								
Test	Specification	Test Method	Initial†	1 M†	3 M†	6 M†	9 M†	12 M†
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms
pH	3.4 – 3.6	STA-EPX-0119	3.6	3.6	3.6	3.5	3.5	3.5

* * *

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001 Upright Position, DOM: 03Mar2017 25°C/60%RH, Stability Data, Stability Protocol PD SVA-01 Rev05								
Test	Specification	Test Method	Initial†	1 M†	3 M†	6 M†	9 M†	12 M†
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	NS	Conforms	Conforms	Conforms	Conforms
pH	3.4 – 3.6	STA-EPX-0119	3.6	NS	3.4	3.5	3.5	3.5

DTX-121 at EAGLEVAS0047275, 277.

~~113.~~109. Each pH measurement obtained for batch SVA001 stored for 21 months under refrigerated storage, followed by 7.5 months at room temperature, fell within the 3.4 to 3.6 range specified by Eagle’s Label and ANDA specification:

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001A Inverted Position, DOM: 03Mar2017 25°C/60%RH Stability After 21 Months Storage at 2-8°C, Stability Protocol PD SVA-02 Rev02, Stability Start: 19Dec2018										
Test	Specification	Test Method	Initial*	1 M	2 M	3 M	4.5 M	6 M	7.5 M	9 M
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms	
pH	3.4 – 3.6	STA-EPX-0119	3.6	3.6	3.6	3.6	3.6	3.6	3.5	

* * *

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001A Upright Position, DOM: 03Mar2017 25°C/60%RH Stability After 21 Months Storage at 2-8°C, Stability Protocol PD SVA-02 Rev02, Stability Start: 19Dec2018										
Test	Specification	Test Method	Initial*	1 M	2 M	3 M	4.5 M	6 M	7.5 M	9 M
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms	
pH	3.4 – 3.6	STA-EPX-0119	3.6	3.6	3.6	3.6	3.5	3.6	3.5	

DTX-123 at EAGLEVAS0047278; DTX-124 at EAGLEVAS0047281.

~~114.~~110. None of the other batches of Eagle’s ANDA Product that have been manufactured have had a pH that deviated to 3.7, 3.8, or 3.9.

~~115.~~111. For batch SVA002, pH measurements at all 37 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

~~116.~~112. For batch SVA003, pH measurements at all 37 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

~~117.~~113. In total, pH measurements taken at 110 of the 111 time points for batches SVA001–003 were within the 3.4–3.6 specification.

~~118.~~114. Batches SVA001–003 are now expired.

~~119.~~115. Batches SVA004–006 were stored both upright and inverted under refrigerated and room temperature storage. ~~18~~24-month stability data is available for batches SVA004–006. Additionally, ~~six~~–twelve month room temperature data for samples from batches SVA004–006 removed from refrigerated storage after 12 months is available.

~~120.~~116. For batch SVA004, pH measurements at all ~~33~~–39 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

~~121.~~117. For batch SVA005, pH measurements at all ~~33~~–39 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

~~122.~~118. For batch SVA006, pH measurements at all ~~33-~~39 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

~~123.~~119. In total, pH measurements at all ~~99-~~117 time points for batches SVA004–006 are within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

~~124.~~120. Batches SVA007–009 were stored both upright and inverted under refrigerated and room temperature storage. ~~12~~18-month stability data is available for batches SVA007–009. Additionally, ~~three-~~nine month room temperature data for samples from batches SVA007–009 removed from refrigerated storage after 12 months is available.

~~125.~~121. For batch SVA007, pH measurements at all ~~27-~~35 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

~~126.~~122. For batch SVA008, pH measurements at all ~~27-~~35 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

~~127.~~123. For batch SVA009, pH measurements at all ~~27-~~35 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle's Label and ANDA specification.

124. In total, pH measurements at all ~~81–105~~ time points for batches SVA007–009 are within the 3.4 to 3.6 range specified by Eagle’s Label and ANDA specification.

125. Since SVA009, Eagle has manufactured, or commenced manufacture of, eight additional batches, SVA010–017. Three of those batches, SVA011–013 were designated as Process Performance Qualification (“PPQ”) Batches, and had samples placed on stability in the inverted position only.

126. For batches SVA011–013, pH measurements at all available 12 time points (for the labeled storage conditions Eagle has proposed for its ANDA Product) were within the 3.4 to 3.6 range specified by Eagle’s Label and ANDA specification.

~~128.~~127. In sum, pH measurements taken at ~~290–344~~ of the ~~291–345~~ time points for batches SVA001–~~009–017~~ have fallen within the 3.4 to 3.6 range specified by Eagle’s Label and ANDA specification.

~~129.~~128. Par did not perform any testing on Eagle’s ANDA Product.

3. Eagle’s Optimized Manufacturing Process for its Proposed Commercial Product Will Maintain pH at 3.4 to 3.6 During Its Shelf Life

~~130.~~129. There is no evidence that Eagle intends physicians to administer a vasopressin composition having a pH of 3.7 to 3.9, ~~or 3.8~~, according to the claimed methods. Further, there is no evidence that Eagle intends to make, use, or sell a

vasopressin product having a pH of 3.7 to 3.9, as required by claim 1 of the '785 patent.

~~131.~~130. Eagle has the opposite intention of manufacturing a product that does not have a pH of 3.7 to 3.9, ~~or 3.8~~, at any point during the proposed shelf life.

~~132.~~131. After the out-of-specification result was obtained for batch SVA001, Eagle modified its manufacturing process to ensure that the pH of its ANDA Product is maintained between 3.4 and 3.6 throughout the proposed shelf life, as specified by Eagle's Label and ANDA specification. Specific changes include narrowing the pH range(s) and lowering the target pH during compounding, adding a new step requiring a stabilization period after mixing in acetic acid, and narrowing the pH specification for in-process testing. These changes were made to ensure that the pH of Eagle's ANDA Product is released from manufacturing at or near 3.50.

~~133.~~132. More specifically, batches SVA007 ~~and SVA008~~ and SVA010–017 were manufactured using a compounding pH range of 3.42 to 3.50, with a target pH of 3.46, and batch SVA009 was manufactured using a compounding pH range of 3.42 to 3.54, also with a target pH of 3.46. These acceptable pH ranges were narrowed from the pH range of 3.4 to 3.6 (target 3.5) that was in place during manufacturing of batches SVA001–006.

~~134.~~133. Batches SVA007–017~~09~~ included the addition of the new step requiring a stabilization period after mixing in acetic acid to ensure that the acetic acid added during compounding was sufficiently dispersed (resulting in a homogenous solution). This stabilization period requires that the pH of samples obtained from the top and bottom of the mixing vessel be within ± 0.03 pH units of one another, and within the specified, acceptable pH range, for at least 30 minutes. If the pH does not meet these criteria, then the pH must be adjusted with acetic acid and the stabilization period repeated. The acceptable pH range for the pH stabilization period was 3.42 to 3.50 for SVA007–~~and SVA~~–008 and SVA010–017, and 3.42 to 3.54 for SVA009.

~~135.~~134. The pH specification for in-process testing, which functions as a “check” on the manufacturing process, was also narrowed for batches SVA007–~~009~~017: 3.42 to 3.50 for SVA007 and SVA008, and 3.42 to 3.54 for SVA009–17. By contrast, the in-process pH specification in place for SVA001–003 was 2.5 to 4.5, and 3.4 to 3.6 for SVA004–006.

~~136.~~135. AMRI would not release any batch from manufacturing that fails in-process specifications.

136. These changes demonstrate that Eagle’s goal of releasing batches from manufacturing at a pH at or near the middle of its release specification is reproducible: batches SVA007, SVA008, and SVA009 were released from

manufacturing at a pH of 3.50, 3.52, and 3.48 respectively. Likewise, batches SVA012–014, and 17 were released from manufacturing at a pH of 3.48, 3.49, 3.49, and 3.47 respectively.

137. Batches SVA010, SVA011, SVA015, and SVA016 were either aborted mid-manufacture or rejected after manufacture, before release, for reasons unrelated to pH stability. Nonetheless, SVA010 was manufactured with an in-process pH of 3.48 before being aborted. SVA011 was manufactured with an in-process pH of 3.50 (pre- and post-filtration), and 3.52 (release) before being rejected, although samples from SVA011 remain on stability for regulatory purposes. SVA016 was manufactured with an in-process pH of 3.52 (pre-filtration), 3.50 (post-filtration), and 3.49 (release) before being rejected. And SVA015 was aborted before any in-process measurements were taken.

~~137.~~138. Further, scientists from both Eagle and AMRI expect these changes will maintain the pH of Eagle’s proposed commercial product within the 3.4 to 3.6 range specified by Eagle’s Label and ANDA specification throughout the proposed shelf life: ~~182~~-month stability data generated to date for SVA007–009 shows that the pH for each of these batches has remained within the 3.4 to 3.6 pH range specified by Eagle’s Label and ANDA specification at each time point.

~~138.~~139. Par has provided no evidence to the contrary.

~~139.~~140. The proposed commercial manufacturing process Eagle has submitted to the FDA, like batches SVA007–009, 11–14, 16, and 17, reflects the modifications Eagle made to its manufacturing process after the out-of-specification pH measurement for SVA001. In particular, the proposed commercial process will utilize a compounding pH range of 3.42 to 3.49, with a target pH of 3.45, and an acceptable pH range of 3.42 to 3.50 during the stabilization period. In-process testing will require the pH to be between 3.42 and 3.54.

~~140.~~141. The lone batch Par relies on to show alleged infringement, SVA001, would not have met the in-process pH specifications Eagle utilized when manufacturing batches SVA007–017~~09~~, nor would it meet the in-process pH specifications Eagle has proposed for its commercial product.

~~4.—There is No Evidence That Eagle’s ANDA Product Will Be Stored for Four Weeks at pH 3.8~~

~~141. Eagle’s Label, which describes Eagle’s ANDA Product as adjusted with acetic acid to a pH of between 3.4 and 3.6, not 3.8, does not provide any instruction or recommendation to store Eagle’s ANDA Product for at least four weeks prior to administration.~~

~~142. Par has not provided any evidence that batch SVA001 was stored for at least four weeks after reaching a pH of 3.8. The lone out-of-specification result from batch SVA001 was obtained at the 24-month stability date. The last measurement~~

~~obtained prior to the 24-month stability date was at 18 months, when the pH of batch SVA001 was 3.6:~~

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001 Upright Position, DOM: 03Mar2017 Long Term (2° to 8°C) Stability Data, Stability Protocol PD SVA-01 Rev05										
Test	Specification	Test Method	Initial†	1 M†	3 M†	6 M†	9 M†	12 M†	18 M†	24 M†
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	NS	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms
pH	3.4 – 3.6	STA-EPX-0119	3.6	NS	3.4	3.6	3.6	3.6	3.6	3.7, 3.8, 3.7 PR661354

~~143. Par did not perform any testing on Eagle's ANDA Product.~~

~~144. Additionally, Eagle's ANDA Product would not be administered to any patient after the end of its proposed shelf life; rather, pharmacists will discard Eagle's ANDA Product according to the shelf life described in Eagle's Label, which is 24 months from the date of manufacture when stored under refrigerated conditions.~~

~~**5. Eagle's ANDA Product Will Not Be Used by a Single Entity to Practice the Claims of the '526 patent**~~

~~145. Claim 13 of the '526 patent has several distinct method steps: storing the recited formulation for at least about four weeks at 2–8°C; providing the recited formulation; and administering the recited formulation to increase blood pressure in a hypotensive human.~~

~~146. Upon approval, Eagle's ANDA Product will be stored, provided, and administered by different entities. Hospital pharmacists will acquire Eagle's ANDA Product and store that product, including under refrigeration. When needed, those~~

~~same pharmacists will distribute Eagle's ANDA Product to physicians for administration to patients.~~

~~147. On the other hand, physicians would alone be responsible for the administration of Eagle's ANDA Product after approval. Only a physician may exercise medical judgment to determine that the administration of vasopressin is warranted to treat vasodilatory shock. Once a physician examines a patient and, in his or her independent judgment, decides to use vasopressin, the administration of that drug proceeds according to the physician's order and under the physicians supervision.~~

~~148. Par has not shown that the activities of pharmacists in storing Eagle's ANDA Product are attributable to the physicians who would be responsible for the administration of Eagle's ANDA Product. For physicians, the first time they handle Eagle's ANDA Product is when it is to be administered to a patient. Physicians have no role in the storage of Eagle's ANDA Product at any point before that time and do not direct and control that process. Physicians may serve on hospital committees that decide which drugs to acquire and may recommend best practices, but at no point do such hospital committees oversee the storage of particular products such as Eagle's ANDA Product and specific units thereof.~~

~~149. Par has not shown that pharmacists will have a role in the use of Eagle's ANDA Product. Physicians exercise independent medical judgment in deciding to~~

~~administer Eagle's ANDA Product, including at a particular dose. Indeed, it would be unlawful and contrary to established medical ethics for any individual to direct and control a clinician's use of Eagle's ANDA Product to treat a patient, including with respect to dose and timing. Pharmacists cannot direct and control a physician's use of Eagle's ANDA Product to treat hypotension.~~

~~150. Par has not shown that hospitals are a single entity that directs and controls the storing, providing, and administration of Eagle's ANDA Product. Although pharmacists and other staff may be employed directly by hospitals, the physicians who will use Eagle's ANDA Product are typically independent contractors. As independent contractors, physicians using Eagle's ANDA Product will not be subject to the direction and control of the hospital or its staff in the actual use and administration of Eagle's ANDA Product. Such contracts are silent regarding the use of any drug, let alone requirements regarding the performance of particular method steps using Eagle's ANDA Product. Such contracts also do not override doctors' independent medical judgment in treating patients.~~

~~151. The services of the physicians who use Eagle's ANDA Product and the provision of drugs for that use are billed separately to insurers and patients. Hospitals bill for the provision of supplies, including pharmaceuticals like Eagle's ANDA Product. Physicians provide individualized bills for their services, which may~~

~~include their diagnosis of patients and their administration of treatment, including drugs, to those patients.~~

~~152.—Even where physicians are directly employed by hospitals, they still act independently to diagnose patients and prescribe treatments, including the use and administration of a drug like Eagle’s ANDA Product. Hospitals and their personnel do not direct the use and administration of drugs like Eagle’s ANDA Product in any particular instance of treatment.~~

~~153.—To the extent that personnel other than doctors, such as nurses, are involved in the administration of Eagle’s ANDA Product to treat particular patients, they act under the direction and control of physicians, not hospitals. Even if employed directly by hospitals, such action is an extension of physicians’ own independent medical treatment and the performance of particular methods using Eagle’s ANDA Product is not done at the direction and control of the hospital.~~

~~B.—Eagle’s ANDA Product Will Not Meet the Claimed Degradation and Impurity Requirements~~

~~1.—Eagle Will Not Induce Infringement of the Claimed Degradation and Impurity Requirements~~

~~154.—The lone out-of-specification result from batch SVA001 was obtained at the 24-month stability date, at the end of the product shelf life. Eagle’s ANDA Product would not be administered to any patient after the end of its proposed shelf life; rather, pharmacists will discard Eagle’s ANDA Product according to the shelf~~

~~life described in Eagle's Label, which is 24 months from the date of manufacture when stored under refrigerated conditions, with up to 12 months at room temperature or until manufacturer, whichever is earlier.~~

~~2. Eagle's ANDA Does Not Establish Eagle's ANDA Product Will Meet the Claimed Degradation and Impurity Requirements~~

~~155. As set forth above, Eagle's ANDA specification requires a pH of between 3.4 and 3.6 throughout its proposed shelf life, not 3.7 to 3.9, or 3.8, as required by the Asserted Claims of the Patents in Suit. See supra Section II.A.1.~~

~~156. Eagle's ANDA specification does not show that Eagle's ANDA Product will necessarily exhibit less than 1% degradation after four weeks storage at 2-8°C, as Eagle's ANDA~~ [REDACTED]

[REDACTED] ~~See '526 patent claim 13. Rather, Eagle's ANDA~~

[REDACTED]

[REDACTED]

[REDACTED]

~~157. Nor does Eagle's ANDA specification for total impurities show that Eagle's ANDA Product will necessarily comprise 0.9% to 1.7% impurities having 85% to 100% sequence homology to vasopressin. '209 patent claim 1; '785 patent claim 1.~~

~~158. Eagle's ANDA~~ [REDACTED]

~~[REDACTED] Eagle's ANDA specification does not show that Eagle's ANDA Product will necessarily comprise 0.1% SEQ ID No.: 3. See '209 patent claim 3; '785 patent claim 4.~~

~~159. Eagle's ANDA~~ [REDACTED]

~~[REDACTED] Eagle's ANDA specification does not show that Eagle's ANDA Product will necessarily comprise 0.2% to 0.4% SEQ ID No.: 4. See '209 patent claim 4; '785 patent claim 5.~~

~~160. Eagle's ANDA~~ [REDACTED]

~~[REDACTED] Eagle's ANDA specification does not show that Eagle's ANDA Product will necessarily comprise 0.3% to 0.6% SEQ ID No.: 7. See '209 patent claim 5.~~

~~161. Eagle's ANDA~~ [REDACTED]

~~[REDACTED] Eagle's ANDA specification does not show that Eagle's ANDA Product will necessarily comprise 0.1% to 0.3% SEQ ID No.: 2. See '209 patent claim 7; '785 patent claim 8.~~

~~162. Eagle's ANDA~~ [REDACTED]

~~[REDACTED] Eagle's ANDA specification does not show that Eagle's ANDA Product will necessarily comprise~~

~~0.1% to 0.3% SEQ ID No.: 2 and 0.2% to 0.4% SEQ ID No.: 4. See '209 patent claim 7; '785 patent claim 8.~~

~~3. — Eagle's ANDA Batch Data Do Not Show that Eagle's ANDA Product Will Exhibit "Less Than 1% Degradation" After Storage at 2–8°C For Four Weeks at pH 3.8~~

~~163. — As set forth above, Eagle's ANDA batch data do not show Eagle's ANDA Product will have a pH of 3.8 during its shelf life. See supra Section II.A.2.~~

~~164. — [REDACTED]~~

~~[REDACTED] See '526 patent claim 1; see also supra Section II.A.4.~~

~~165. — [REDACTED]~~

~~[REDACTED]~~

~~166. — [REDACTED]~~

~~[REDACTED]~~

~~167. — [REDACTED]~~

~~[REDACTED]~~

~~[REDACTED]~~

~~168. — [REDACTED]~~

~~[REDACTED]~~

~~[REDACTED]~~

[REDACTED]

[REDACTED]

~~169.~~ [REDACTED]

[REDACTED]

~~170.~~ [REDACTED]

[REDACTED]

[REDACTED]

~~171.~~ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

~~172. Par did not perform any testing on Eagle's ANDA Product.~~

~~**4. Eagle's ANDA Batch Data Do Not Show that Eagle's ANDA Product Will Have the Specified Impurities**~~

~~173. As set forth above, Eagle's ANDA batch data do not show Eagle's ANDA Product will have a pH of 3.7-3.9 during its shelf life. See supra Section H.A.2.~~

~~174. Impurity data provided in Eagle's ANDA for batch SVA001 at the 24-month stability time point, when the lone out-of-specification pH measurement was~~

~~obtained, does not show that Eagle's ANDA Product will meet the specified impurity limitations.~~

~~175.~~

~~176. Par did not perform any testing on Eagle's ANDA Product.~~

~~a. 0.1% SEQ ID No.: 3 ('209 patent claim 3; '785 patent claim 4)~~

~~177.~~

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001 Upright Position, DOM: 03Mar2017										
Long Term (2° to 8°C) Stability Data, Stability Protocol PD SVA-01 Rev05										
Test	Specification	Test Method	Initial†	1 M†	3 M†	6 M†	9 M†	12 M†	18 M†	24 M
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	NS	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms
pH	3.4 – 3.6	STA-EPX-0119	3.6	NS	3.4	3.6	3.6	3.6	3.6	3.7, 3.8, 3.7 PP-661354

EXHIBIT 3

[REDACTED]

~~178.~~ [REDACTED]

[REDACTED]

[REDACTED]

~~179.~~ [REDACTED]

[REDACTED]

[REDACTED]

~~180.~~ [REDACTED]

[REDACTED]

[REDACTED]

~~181.~~ [REDACTED]

[REDACTED]

[REDACTED]

~~182.~~ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

~~b. 0.3% to 0.6% SEQ ID No.: 7 ('209 patent claim 5)~~

~~183.~~ [REDACTED]

[REDACTED]

184.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001 Upright Position, DOM: 03Mar2017 Long Term (2° to 8°C) Stability Data, Stability Protocol PD SVA-01 Rev05										
Test	Specification	Test Method	Initial†	1 M†	3 M†	6 M†	9 M†	12 M†	18 M†	24 M
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	NS	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms
pH	3.4 – 3.6	STA-EPX-0119	3.6	NS	3.4	3.6	3.6	3.6	3.6	3.7, 3.8, 3.7 PR661354

[REDACTED]

[REDACTED]

185.

[REDACTED]

[REDACTED]

[REDACTED]

186.

[REDACTED]

[REDACTED]

[REDACTED]

~~187.~~

~~188.~~

~~e. 0.1% to 0.3% SEQ ID No.: 2 and 0.2% to 0.4% SEQ ID No.: 4 ('209 patent claim 7; '785 patent claim 8)~~

~~189.~~

Vasopressin Injection, USP 0.0377 mg/mL, 2017 Registration Batch, Batch SVA001 Upright Position, DOM: 03Mar2017										
Long Term (2° to 8°C) Stability Data, Stability Protocol PD SVA-01 Rev05										
Test	Specification	Test Method	Initial†	1 M†	3 M†	6 M†	9 M†	12 M†	18 M†	24 M
Product Physical Appearance	Clear, colorless to practically colorless solution, essentially free of visible particulates	STA-EPX-0119	Conforms	NS	Conforms	Conforms	Conforms	Conforms	Conforms	Conforms
pH	3.4 – 3.6	STA-EPX-0119	3.6	NS	3.4	3.6	3.6	3.6	3.6	3.7, 3.8, 3.7 PR661354

III. THE ASSERTED CLAIMS OF THE PATENTS-IN-SUIT ARE UNENFORCEABLE FOR INEQUITABLE CONDUCT

~~190.~~142. The named inventors Vinayagam Kannan and Matthew Kenney, Par's former Senior Vice President of Regulatory Affairs Michelle Bonomi-Huvala and Par's patent prosecution counsel Craig Kenesky knowingly submitted unmistakably false declarations to the PTO to overcome the Examiner's rejection of the pending claims of the application for the '239 patent, which are presumed to be material and submitted with an intent to deceive.

~~191.~~143. Even absent the presumption, the unmistakably false Kannan and Bonomi-Huvala declarations were material to the prosecution of the '239 patent, and were submitted with an intent to deceive.

~~192.~~144. The inequitable conduct committed during prosecution of the '239 patent, which is a ~~parent or~~ grandparent ~~patent~~ application to the Patents-in-Suit, infected the prosecution of the Patents-in-Suit and therefore renders the claims of those patents unenforceable under the doctrine of infectious unenforceability.

~~193.~~145. In addition, one or more of the named inventors of the Patents-in-Suit knowingly withheld material information from the PTO during prosecution of the Patents-in-Suit, including prior art, internal testing data, and other information

that would have undermined their assertions of the criticality of the claimed pH, with the specific intent to deceive the PTO.

A. Inequitable Conduct During Prosecution of the '239 Patent

~~194.~~146. Faced with a final rejection in light of the prior art April 2014 Vasostrict® Label, named inventor Vinayagam Kannan, Par's former Senior Vice President of Regulatory Affairs Michelle Bonomi-Huvala and prosecuting attorney Craig Kenesky knowingly submitted unmistakably false declarations to the PTO in order to overcome the prior art rejection. These declarations were submitted with the specific intent to deceive the PTO to secure the issuance of the '239 patent.

~~195.~~147. Mr. Kannan, Ms. Bonomi-Huvala, and Mr. Kenesky all knew that the executed Kannan and Bonomi-Huvala declarations, as well as the representations made by Mr. Kenesky to the Examiner as to those declarations, were false.

~~196.~~148. Mr. Kenney admitted that he did not invent or contribute to *any* of the subject matter of the April 2014 Vasostrict® Label:

Q. Now that you have reviewed the label, can you please let me know if you worked on or contributed to any portions of this label, including any content thereof?

A. I don't recall doing any work that contributed to the information on this label.

Kenney Dep. Tr. 30:21–31:2; *see also, e.g., id.* 36:20–24, 39:14–20, 40:11–17, 41:3–8, 41:19–42:2, 42:10–14, 43:6–12.

~~197.~~149. Mr. Kannan also admitted that he did not invent or contribute to the subject matter of the April 2014 Vasostrict® Label that he claimed to have invented in his declaration, either:

Q. Okay. If we go to paragraph 7 of your declaration, Exhibit 34. You state, “The label discloses part of the subject matter of the claims including a method of increasing blood pressure in a hypotensive human. The label recites that Vasostrict is indicated to increase blood pressure in adults with vasodilatory shock who remain hypotensive.” Stopping there. You did not invent the method to increase blood pressure in adults with vasodilatory shock who remain hypotensive as described in the label, correct?

A. That is correct, I did not invent.

Q. The paragraph 7 of your declaration, Exhibit 34 goes on to state, “The label recites the infusion rate of the claim by stating that for postcardiotomy shock, start with a dose of 0.03 units per ml -- per minute,” excuse me, “for septic shock, start with a dose of 0.01 units per minute.” Do you see that?

A. I see that.

Q. And you didn’t invent that subject matter either, correct?

A. Correct.

Q. And, again, you did not invent that formulation described in Section 11 on 14 page 6 of the April 2014 Vasostrict label, right?

A. Correct.

Kannan Dep. Tr. 252:3–17, 253:6–254:5, 254:6–18; *see also id.* 254:6–18, 259:5–

13.

~~198.~~150. Mr. Kannan confirmed that his only alleged “contribution” to the subject matter of the April 2014 Vasostrict® Label related to testing of refrigerated storage of diluted vasopressin formulations. But his declaration claimed to have invented all of the subject matter of the April 2014 Vasostrict® Label cited by the Examiner as the basis for her anticipation and obviousness rejections, and the claims of the ’239 patent that ultimately issued include no limitation related to refrigerated storage of diluted vasopressin formulations. Nor is any such limitation found in any of the Patents-in-Suit.

~~199.~~151. Thus, the representations made in the Kannan declaration are unmistakably false, and Mr. Kannan knew that they were false at the time he signed and submitted his declaration to the PTO.

~~200.~~152. Indeed, according to Par’s corporate witness and discovery responses, [REDACTED]

[REDACTED]
[REDACTED].

~~201.~~153. The Bonomi-Huvala declaration was also unmistakably false, as the named inventors of the ’239 patent never “forwarded the details of the joint invention [(i.e. the subject matter of the April 2014 Vasostrict® Label)] to the regulatory team at PAR STERILE.”

~~202.~~154. Mr. Bonomi-Huvala [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

~~203.~~155. Mr. Kenesky, who made all final decisions for prosecution counsel regarding submissions to the PTO, also knew that Mr. Kannan and Mr. Kenney did not invent the subject matter of the April 2014 Vasostrict® Label and did not forward the subject matter of the April 2014 Vasostrict® Label to Par's regulatory department.

~~204.~~156. Nevertheless, Mr. Kenesky was aware and understood that to disqualify the April 2014 Vasostrict® Label as prior art, it was necessary to show that Mr. Kannan and/or Mr. Kenney had actually invented all the subject matter described in the April 2014 Vasostrict® Label that was relied upon by Examiner

Bradley in the October 21, 2015 Office Action. He thus knowingly submitted the false Kannan and Bonomi-Huvala declarations.

~~205.~~157. No one involved in the prosecution of the '239 patent or otherwise advised Examiner Bradley that that the representations made in the Kannan and Bonomi-Huvala declarations were false.

~~206.~~158. Furthermore, Examiner Bradley had no ability to independently examine the facts of the Kannan and Bonomi-Huvala declarations because they relied on research and development and communications that were internal and confidential to Par.

~~207.~~159. These false representations to the PTO constitute affirmatively egregious misconduct.

~~208.~~160. But-for these false representations, the '239 patent never would have issued, as Examiner Bradley's Final Rejection would not have been overcome without the false declarations. Indeed, the April 2014 Vasostrict® Label anticipates and/or renders obvious every claim of the '239 patent.

~~209.~~161. Given the strength of Examiner Bradley's rejection in light of the April 2014 Vasostrict® Label, and the subsequent false representations made by the inventors to disqualify that prior art reference, the single most reasonable inference is that Mr. Kenesky, Mr. Kannan, and Ms. Bonomi-Huvala submitted the

unmistakably false declarations with the specific intent to deceive the PTO to secure the issuance of the '239 patent.

B. Inequitable Conduct During Prosecution of the '239 Patent Renders the Patents-in-Suit Unenforceable

~~210.~~162. The affirmative egregious misconduct committed by Mr. Kenesky, Mr. Kannan, and Ms. Bonomi-Huvala during prosecution of the '239 patent renders unenforceable the Patents-in-Suit under the doctrine of infectious unenforceability.

~~211.~~163. Because Vinayagam Kannan and Matthew Kenney were named inventors on each of the Patents-in-Suit, Examiner Bradley would have believed that she could not rely on the April 2014 Vasostrict® Label as prior art during prosecution of those patents, as evidenced by the fact that she cited the April 2014 Vasostrict® Label in support of her rejection of the claims of the '209 and '785 patents, but only as an “evidentiary reference.” In so doing, Examiner Bradley stressed that such an “evidentiary reference” need not qualify as prior art. Therefore, it is clear that the misconduct during the prosecution of the '239 patent infected those of the Patents-in-Suit and renders them unenforceable.

~~212.~~164. Unable to rely on the April 2014 Vasostrict® Label, the next closest prior art Examiner Bradley identified was PPC combined with Russell 2008, among other references, in rejecting the claims of the Patents-in-Suit. Examiner

Bradley rejected the pending claims' pH limitations of 3.8 or 3.7–3.9 as presumptively obvious over PPC's range of pH 2.5 to 4.5.

213.165. The inventors were only able to overcome this rejection by relying on the flawed data in the Criticality Declarations. The inventors ~~resubmitted the Criticality Declarations during the prosecution of the '526 patent and~~ relied on the same data as set forth in the '209 and '785 patents' specifications during the prosecutions of those patents.

214.166. The April 2014 Vasostrict® Label was material to the prosecution of, and would have invalidated as anticipated and/or obvious, each of the claims of the Patents-in-Suit. The April 2014 Vasostrict® Label discloses a narrower pH range of 3.4–3.6 than PPC, as well as several other limitations not found in PPC or Treschan.

215.167. Further, the data relied on by the inventors would have been insufficient to show the criticality of the claimed pHs between 3.7 and 3.9 over the pH range 3.4–3.6 in the April 2014 Vasostrict® Label, and the inventors would not otherwise have been able to establish criticality over the formulation described in that label.

216.168. This is especially true, given that Eagle is being accused of infringing the Patents-in-Suit for practicing the prior art Original Vasostrict® product, which is embodied by the April 2014 Vasostrict® Label.

C. The Named Inventors Committed Further Inequitable Conduct During Prosecution of the Patents-in-Suit

1. The Inventors Withheld Material Information Regarding the Prior Art Pitressin® Formulation

~~217.~~169. While attempting to demonstrate the criticality of the claimed pH range in the Patents-in-Suit, the inventors also knowingly withheld material information from the PTO.

~~218.~~170. First, the inventors withheld material information regarding the prior art Pitressin® formulation, which also was formulated with a pH of 3.4–3.6. The only difference between Pitressin® and the subsequently released Original Vasopressin® described in the April 2014 Vasopressin® Label was that Pitressin® included minimal overages of vasopressin and chlorobutanol, which nonetheless fell within the claim requirements.

~~219.~~171. [REDACTED]

~~220.~~172. [REDACTED]

~~221.~~173. [REDACTED]

~~222.~~174. [REDACTED]

~~223.~~175. The single most reasonable inference is that the named inventors withheld [REDACTED] with the specific intent to deceive the PTO to secure the issuance of the Patents-in-Suit.

2. The Named Inventors Withheld from the PTO Normalized Impurity Data to Bolster Their Criticality Arguments

~~224.~~176. Among the flaws in the Criticality Declarations, the underlying studies used vasopressin samples with different starting amounts of impurities and vasopressin assay. In particular, the study of the pH range 2.5 to 3.4 was conducted later than the study of the pH range 3.5 to 4.5, when the API lot had expired and the starting levels of impurities were significantly higher.

~~225.~~177. For example, the test composition used for pH of 2.5 started with initial impurity levels of 2.48%, whereas the test composition used for pH of 3.8 started with initial impurity levels of only 0.74%.

~~226.~~178. To account for the differences in the starting impurity levels, it was necessary to normalize the data for both impurities and vasopressin assay. Indeed, the Criticality Declarations stated that normalization was important for this very reason, and represented that all variables other than pH had been normalized. But that representation was false. The only variable that had been normalized in the Criticality Declarations was the vasopressin assay; the impurity levels were not normalized.

~~227.~~179. The named inventors were in possession of normalized impurity data and plots before and during prosecution of the Patents-in-Suit. The normalized impurity data, however, were withheld from the Examiner, and the inventors instead submitted non-normalized impurity data and plots.

~~228.~~180. The normalized impurity data that Mr. Kannan and Mr. Kenney withheld from the PTO contradicted the inventors' arguments that the claimed pHs between 3.7 and 3.9 are critical, as it showed the lowest impurity gains generally occurred at pHs at or between 3.9 and 4.2 (depending on temperature), rather than within the claimed pHs between 3.7 and 3.9. As such, producing normalized

impurity data would have directly contradicted the inventors' argument that pHs between 3.7 and 3.9 were critical.

~~229.~~181. But-for the inventors' actions of withholding the normalized impurity data, Examiner Bradley could not reasonably have found the claimed pH values critical during prosecution of the Patents-in-Suit. Therefore, the withheld normalized impurity data was material to the patentability of the Patents-in-Suit.

~~230.~~182. The single most reasonable inference that can be drawn from the selective withholding of the normalized impurity data is that the inventors only produced data that supported their criticality arguments, with a specific intent to deceive the PTO to grant the Patents-in-Suit.

3. The Named Inventors Withheld from the PTO Other Information Relevant to Criticality of the Claimed pH That Was Material to the Prosecution

~~231.~~183.

[REDACTED]

~~232.~~184.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

~~233.~~185.

[REDACTED]

[REDACTED]

[REDACTED]

~~234.~~186.

[REDACTED]

[REDACTED]

[REDACTED]

~~235.~~187.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

~~236.~~188.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

~~237.~~189. In addition, the inventors also withheld information relating to the variability in the analytical method used to measure that data underlying the Criticality Declarations from the Examiner.

~~238.~~190. For example, the named inventors failed to inform the PTO that, in the data reported in the Criticality Declarations, the purported difference in impurity levels between a pH of 3.6 and 3.8, which amounts to no more than 0.13%, is more than an order of magnitude less than the inherent variability of the testing method itself (e.g., 2.0%).

~~239.~~191. The Criticality Declarations neither disclose nor account for this inherent variability. Nor did the named inventors otherwise disclose this variability to the PTO because such information would have directly undermined the inventors' arguments that the claimed pHs between 3.7 and 3.9 are critical over the pH range of 2.5–4.5 disclosed by PPC.

~~240.~~192. Had Examiner Bradley been informed of the inherent variability present in the data points, she could not reasonably have accepted the inventors' representation that the claimed pH ranges and pH are critical over the prior art pH range of 3.4–3.6.

~~241.~~193. The single most reasonable inference that can be drawn from the withholding of the variability present in the data points provided in the Criticality

Declarations is that the inventors specifically intended to deceive the PTO to secure the issuance of the Patents-in-Suit.

IV. THE ASSERTED CLAIMS OF THE PATENTS-IN-SUIT ARE INVALID

A. All Asserted Claims Are Anticipated by Original Vasostrict® With Its Prescribing Information

~~242.~~194. Original Vasostrict® was sold with its prescribing information (including at least the September 2014 and March 2015 Vasostrict® Labels), and used in accordance with that prescribing information, before the effective filing dates of the Patents-in-Suit. It is therefore prior art to those Patents-in-Suit.

~~243.~~195. Par has alleged that Eagle's ANDA product, and/or use thereof, infringes each asserted claim of the Patents-in-Suit.

~~244.~~196. Eagle's ANDA product is materially identical to the prior art Original Vasostrict® product.

~~245.~~197. The only claim limitations that Par asserts were not disclosed by sale and use of Original Vasostrict® before the effective filing dates of the Patents-in-Suit are the pH (~~all patents~~), ~~degradation ('526 patent)~~ and impurity (~~'209 and '785 patents~~) limitations.

198. Like with the single ANDA registration batch of Eagle's ANDA product Par relies on for infringement, at least one NDA registration batch for Original Vasostrict® also rose to pH 3.8 during its shelf life.

199. At least one commercial batch of Original Vasostrict® was found to have a pH of 3.7 at release. This result was within specification for Original Vasostrict®. At that time, this lot of Original Vasostrict® met or bettered each impurity limitation of the asserted claims of the Patents-in-Suit.

200. Sales records belatedly produced by Par demonstrate that numerous commercial batches of Original Vasostrict® were on sale and in public use with a pH of 3.6 and impurities that met or bettered the limitations of the asserted claims of the Patents-in-Suit within shelf life, including at least lots 788442, 788432, 788433, 788435, and 802171. To the extent any such commercial batch of Original Vasostrict® drifted to pH 3.7 within shelf life, that prior art product would have satisfied the elements of the asserted claims of the Patents-in-Suit.

~~246.~~201. Applying Par's recently disclosed variability theory for infringement, any batch of Original Vasostrict® at pH 3.6 necessarily included vials at pH 3.7.

~~247.~~ [REDACTED]

[REDACTED]

~~248.~~202. The ~~degradation requirement of the '526 patent, and the~~ impurity requirements of the '209 and '785 patents, are merely inherent results of the claimed formulations.

~~249.~~203. Original Vasostrict®, according to its prescribing information, including at least the September 2014 Vasostrict® Label and March 2015 Vasostrict® Label, was sold and used to treat hypotension at a dose of between 0.01 and 0.07 units/minute.

~~250.~~204. Therefore, to the extent that Eagle's ANDA product will infringe any asserted claim of the Patents-in-Suit, that claim is invalid as anticipated by Original Vasostrict®.

B. All Asserted Claims Are Obvious Over Original Vasostrict® With Its Prescribing Information

~~251.~~205. To the extent that any asserted claim of the Patents-in-Suit is not anticipated by Original Vasostrict®, it would have been obvious over Original Vasostrict®.

206. The pH limitations were at the very least obvious because pH optimization was a standard part of any formulation development process, and Par's own expert has admitted that pH optimization was routine as of the effective filing dates of the Patents-in-Suit.

207. Furthermore, sales records belatedly produced by Par demonstrate that commercial lots of Original Vasostrict® were on sale and in public use at pH 3.6 with impurities that satisfied or bettered the limitations of the asserted claims of the Patents-in-Suit, including at least lots 788442, 788432, 788433, 788435, and 802171. This pH value abuts the range of the asserted claims of the Patents-in-Suit.

252.208. The asserted claims of the Patents-in-Suit are therefore presumptively obvious in light of the commercial sale and/or public use of Original Vasostrict® because lots of that product had an abutting pH and satisfied all other elements of the asserted claims of the Patents-in-Suit.

253.209. To the extent ~~t~~The ~~degradation limitation of the '526 patent, and~~ impurities limitations of the '209 and '785 patents were not met by any lots of Original Vasostrict®, they; are merely the inherent results of optimizing the pH limitations, or at the very least would have been readily achieved through standard formulation development procedures, including choice of pure vasopressin API and appropriate storage conditions, and a POSA would have had a reasonable expectation of success in achieving the claimed ~~degradation and~~ impurity limits. Par's expert has admitted that it would have been obvious to select pure vasopressin API for a pharmaceutical formulation.

254.210. The evidence submitted by Par is insufficient to show that a pH within the claimed range is critical to stability of a vasopressin formulation, particularly as interpreted by Par for infringement to include achieving the pH at any point in the shelf-life for no more than five minutes. In particular, the data in the Criticality Declarations suffer from myriad flaws and are unreliable. The underlying experiments were conducted with different starting materials and variables such as impurities levels were not controlled, precluding any meaningful comparison. Such

data also fail to meet the standard for demonstrating criticality, including showing a difference in kind, not just degree, relative to the prior art. Instead, the inventors' criticality data show at most minor differences in impurity levels over the prior art, which are not commensurate with the scope of the claims.

~~255.~~211. Par also has not shown that the prior art taught away from the claimed pH range; rather, the FDA Bioequivalence Review it relies on at most states that an initial pH of 3.4–3.6 yields optimal stability, while Par asserts that its claims cover a formulation, such as that of Eagle's ANDA Product, that has a target pH of 3.4–3.6. Furthermore, contrary to Par's teaching away arguments, other vasopressin formulations were made to a target pH of 3.8, including Lithuanian Patent No. 4487 and [REDACTED]

~~256.~~212. Par has not alleged that any secondary considerations demonstrate the non-obviousness of the claimed formulations.

C. The Asserted Claims of the '785 Patent Are Anticipated by Pitressin®

~~257.~~213. Pitressin® was sold with its prescribing information (including the Pitressin® 2010 Label and Pitressin® 2012 Label) and used both in accordance with that labeling and according to the prevailing off-label use for the treatment of hypotension, including septic shock and post-cardiotomy shock. It is prior art to the claims of the '785 patent.

~~258.~~214. Eagle's ANDA product is identical to the prior art Pitressin® product but for the exclusion of vasopressin and chlorobutanol overages. Even with overages, the prior art Pitressin® product contained a vasopressin concentration within the Asserted Claims.

215. Pitressin® was sold and used at a pH of 3.7 to 3.9, [REDACTED]
[REDACTED]

~~259.~~216. [REDACTED]
[REDACTED]

217. [REDACTED]
[REDACTED]

~~260.~~218. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

~~261.~~219. Furthermore, the impurities limitations of the '785 patent claims are merely inherent results of the formulations claimed therein. By virtue of having the same formulation, Pitressin® would necessarily have achieved those inherent results.

D. All Asserted Claims Are Obvious over Pitressin®, Alone Or In Combination With Russell 2008, Intravenous Medications 2013, and WHO Standard

~~262.~~220. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

~~263.~~221. Pitressin®'s target pH of 3.4 to 3.6 abuts the pH limitation of the '209 and '785 patents and those limitations are therefore presumptively obvious.

~~264.~~222. To the extent Pitressin® had a different pH from the claims, any such difference is the obvious result of routine optimization, a standard process that Par's expert admits was routine in the field as of the earliest effective filing dates.

~~265.~~223. To the extent Pitressin® did not already satisfy the degradation limitation of the '526 patent and impurities limitations of the '209 and '785 patents, they are merely the inherent results of optimizing the pH limitations. At the very least, these formulation properties would have been readily achieved by a POSA through the routine formulation development process, including using low-impurity vasopressin API and appropriate storage conditions. Using those techniques, a POSA would have had a reasonable expectation of success in achieving the claimed degradation and impurity limits. Par's expert further admitted that it would have been obvious to select pure vasopressin API for a pharmaceutical formulation.

~~266.~~224. Although Pitressin® was not indicated for the treatment of hypotension, such off-label use was widespread. Par has admitted that Pitressin® was used to treat hypotension at an intravenous dose of between 0.01 and 0.1 units/minute.

~~267.~~225. Scholarly articles regarding clinical trials like Russell 2008 and standard handbooks like Intravenous Medications 2013 also taught the use of Pitressin® and other vasopressin products at an intravenous dose of between 0.01 and 0.1 units/minute to treat hypotension. Such guidance renders the use of Pitressin® to practice the recited methods of treatment obvious. Par does not dispute that it would have been obvious to administer Pitressin® according to the recited methods.

~~268.~~226. Although Pitressin® was labeled for room temperature storage, refrigerating Pitressin® would have been obvious as of the earliest effective filing dates. Refrigeration of aqueous peptide pharmaceutical products was and remains a routine practice and, as of the earliest effective filing dates of the Patents-in-Suit, all commercially available vasopressin products were refrigerated. References such as WHO Standard for vasopressin further taught that vasopressin products should be refrigerated to maximize stability, including in the analogous context of preparing standard formulations for analysis. Par's expert has also admitted that a POSA

would have expected refrigeration to result in greater stability, less degradation, and fewer impurities, than room temperature storage.

~~269.~~227. Par's evidence does not establish any criticality over Pitressin® or teaching away from the recited pH limitations for the same reasons set forth above.

E. All Asserted Claims Are Obvious Over The April 2014 Vasostrict® Label

~~270.~~228. The April 2014 Vasostrict® Label was published in April 2014 and is therefore prior art to the Asserted Claims.

~~271.~~229. Eagle's ANDA filing expressly relies on the formulation approved by the FDA with the April 2014 Vasostrict® Label. Accordingly, the formulation disclosed by the April 2014 Vasostrict® Label is identical to that of Eagle's ANDA product. Save for storage conditions, the April 2014 Vasostrict® Label is materially identical to the proposed prescribing information for Eagle's ANDA product.

~~272.~~230. As with the other prescribing information for Original Vasostrict® and that accused for Eagle's ANDA product, the April 2014 Vasostrict® Label discloses the formulation of Original Vasostrict® as well as its use to treat hypotension at an intravenous dose of between 0.01 and 0.07 units/minute.

~~273.~~231. To the extent the formulation described by the April 2014 Vasostrict® Label does not have the same pH as the formulations of the Asserted Claims, any such difference is the obvious result of routine optimization, a standard process that Par's expert admits was routine in the field as of the earliest effective filing dates.

~~274.~~232. The Asserted Claims of the '209 and '785 patent are presumptively obvious over the abutting pH range taught by the April 2014 Vasostrict® Label.

233. To the extent ~~The degradation limitations of the '526 patent and the~~ impurities limitations of the '209 and '785 patents were not met by any lots of Original Vasostrict®, they are merely inherent results of the claimed formulations and the vasopressin composition taught by the April 2014 Vasostrict® Label would achieve them. Indeed, Examiner Bradley found that the April 2014 Vasostrict® Label inherently taught the levels of the impurities specified in the '209 and '785 patent in connection with the prosecution of the '239 patent.

~~275.~~234. Sales records belatedly produced by Par demonstrate that commercial lots of Original Vasostrict® were on sale and in public use that satisfied or bettered the impurities limitations of the asserted claims of the Patents-in-Suit, including at least lots 788442, 788432, 788433, 788435, and 802171.

~~276.~~235. Furthermore, a POSA would have achieved those properties through the routine formulation process, including the selection of high-purity vasopressin API for the formulation and appropriate storage conditions. Par's expert has admitted that such steps would have been obvious to a POSA.

~~277. Although labeled for room temperature storage, it would have been obvious to improve the shelf life and stability of the formulation described in the April 2014 Vasostrict® Label by refrigerating it, including for the same reasons as discussed for Pitressin®. Par's expert has admitted that a POSA would have expected refrigeration to improve stability.~~

~~278.~~236. Par's evidence does not establish any criticality over the April 2014 Vasostrict® Label or teaching away from the recited pH limitations for the same reasons set forth above.

F. All Asserted Claims Are Obvious Over American Regent Vasopressin Injection, Alone Or In Combination With Russell 2008 and Intravenous Medications 2013.

~~279.~~237. American Regent Vasopressin Injection was sold with its prescribing information and used to treat patients before the earliest effective filing dates of the Asserted Claims. American Regent Vasopressin Injection is therefore prior art.

~~280.~~238. American Regent Vasopressin Injection had the same formulation as the recited claims, including the allegedly critical pH of [REDACTED] Indeed,

American Regent Vasopressin Injection was adjusted to pH [REDACTED] during manufacture at least twenty years prior to the earliest effective filing dates of the Asserted Claims.

~~281.~~239. By virtue of having the same formulation as the Asserted Claims, including [REDACTED] American Regent Vasopressin Injection necessarily achieved ~~the degradation limitations of the '526 patent and~~ the impurities limitations of the '209 and '785 patent. To the extent American Regent Vasopressin Injection did not satisfy those claim limitations, the Asserted Claims cannot comply with the requirements of Section 112 because the Patents-in-Suit disclose no more than the same formulation.

~~282.~~240. Furthermore, it would have been obvious to prepare the American Regent Vasopressin Injection formulation using high-purity API or to store American Regent Vasopressin Injection in accordance with its labeling under refrigeration to minimize degradation impurities levels. By doing so, a POSA would have achieved the claimed degradation and impurities limitations with a reasonable expectation of success.

~~283. The American Regent Vasopressin Injection package insert instructed users to store that formulation above freezing (0 °C) but below 23 °C. Contrary to Par's position that a POSA would have understood this to mean room temperature storage, refrigerated storage at 2–8 °C is within that range and consistent with how~~

~~all commercial vasopressin formulations were stored as of the earliest effective filing dates of the Patents-in-Suit.~~

~~284.~~241. As with Pitressin®, it would have been obvious to administer American Regent Vasopressin Injection to treat hypotension at an intravenous dose between 0.01 and 0.1 units/minute. Par does not dispute that using American Regent Vasopressin Injection to practice the recited methods of treatment would have been obvious.

G. All Asserted Claims Are Obvious Over PPC, Alone Or In Combination With Russell 2008, Intravenous Medications 2013, and WHO Standard

~~285.~~242. PPC is a vasopressin injection package insert that was published in 2009. PPC was distributed with Pharmaceutical Partners of Canada's vasopressin product from that time. PPC is prior art.

~~286.~~243. PPC discloses a vasopressin formulation with a pH of 2.5 to 4.5. That pH range encompasses those of the Asserted Claims and renders them presumptively obvious.

~~287.~~244. The pH limitations were at the very least obvious because pH optimization was a standard part of any formulation development process, particularly over the pH range of PPC, and Par's own expert has admitted that pH optimization was routine as of the effective filing dates of the Patents-in-Suit.

~~288.~~245. As Examiner Bradley found during prosecution, PPC's formulation inherently satisfies the ~~degradation and~~ impurities limitations of the Asserted Claims by virtue of having the same ingredients as the claims and an overlapping pH range. During prosecution, the inventors did not dispute the finding that PPC inherently disclosed those limitations.

~~289.~~246. Regardless, a POSA would have had a reasonable expectation of success in achieving low ~~degradation and~~ impurity levels consistent with the claims of the Patents-in-Suit through the routine formulation process, such as by using commercially available low-impurity vasopressin API.

~~290. It would also have been obvious to store the PPC formulation under refrigeration, as with Pitressin®. Refrigeration of aqueous peptide pharmaceutical products is a routine practice and, as of the earliest effective filing dates, all commercially available vasopressin products were refrigerated. References such as WHO Standard for vasopressin further taught that vasopressin products should be refrigerated to maximize stability, including in the analogous context of preparing standard formulations for analysis. Par's expert has also admitted that a POSA would have expected refrigeration to result in greater stability, and less degradation and fewer impurities, than room temperature storage.~~

~~Consistent with the teachings in the art and the standard knowledge of POSAs, Examiner Bradley found during prosecution that it would have been obvious~~

~~to refrigerate the formulation disclosed by PPC. The inventors did not dispute that finding.~~

~~291.~~247. Administering the PPC formulation according to the standard uses in the art, as taught by references like Russell 2008 and Intravenous Medications 2013, would also have been obvious. Par does not dispute that it would have been obvious to administer the PPC formulation to practice the recited method of treatment. Additionally, Examiner Bradley specifically found that it would have been obvious to administer the formulation disclosed by PPC to increase blood pressure in hypotensive humans in view of such references as Russell 2008, a finding the inventors did not dispute.

~~292.~~248. Par's evidence does not establish any criticality over PPC or teaching away from the recited pH limitations for the same reasons set forth above.

H. All Asserted Claims Lack Adequate Written Description

~~1.~~ '526 Patent

~~293. Claim 13 of the '526 patent is invalid for lack of written description because the specification does not describe the composition recited in claim 1, from which claim 13 depends, that is stored at 2-8°C for at least four weeks and that exhibits "less than 1% degradation after storage at 2-8° C. for about four weeks."~~

~~294. Specifically, there is no description of a vasopressin composition having a pH of 3.8 that was stored at 2–8°C for at least four weeks that exhibits “less than 1% degradation after storage at 2–8°C. for about four weeks.”~~

~~295. To the extent it would not have been obvious to store prior art vasopressin compositions at 2–8°C, then there is no indication in the specification that the composition recited in claim 1 was, or should have been, stored at 2–8°C. Further, to the extent a POSA would not have had an expectation of achieving less than 1% degradation after storing a prior art vasopressin product at 2–8°C for about four weeks, then similarly, there is no indication that storing any of the compositions recited in the examples in the specification would have achieved less than 1% degradation after storage at 2–8°C for about four weeks.~~

~~296. Claim 13 of the ’526 patent is additionally invalid for lack of written description because the specification does not describe the full scope of the claimed compositions.~~

~~297. Claim 13 of the ’526 patent broadly covers any vasopressin composition that has a pH of 3.8, that is formulated with acetic acid, and has less than 1% degradation after storage at 2–8°C for about four weeks.~~

~~298. There is no disclosure in the specification evidencing that the inventors were in possession of a vasopressin composition having a pH of 3.8 formulated with acetic acid only, which is the only excipient specifically recited by the claims of the~~

~~'526 patent, where that composition exhibited less than 1% degradation after storage at 2–8°C for about four weeks.~~

~~299.—The verbatim disclosure of certain claim limitations of the '526 patent does not provide written description support as these disclosures do not identify the pH of the composition.~~

~~300.—The specification provides a broad range of acceptable pH ranges, ranging from 2.0 to 5.0.~~

~~301.—The verbatim disclosure of certain claim limitations of the '526 patent also does not provide data supporting the requirement that the composition exhibit less than 1% degradation after storage at 2–8°C for about four weeks.~~

~~302.—The only disclosures in the specification of a vasopressin composition having a pH of 3.8 were formulated with a buffer.~~

~~303.—The only disclosures in the specification of a vasopressin composition having a pH of 3.8 that provide stability data were for vasopressin compositions formulated with acetate buffer.~~

~~304.—The vasopressin compositions formulated with acetate buffer were stored at 25°C and 40°C, not 2–8°C as required by the claims of the '526 patent.~~

~~305.—The '526 patent does not require use of an acetate buffer. The claims are broad enough to cover formulations, such as American Regent Vasopressin Injection, that are formulated with acetic acid only, not acetate buffer, for which~~

~~Par's expert claims there would not have been a reasonable expectation of success achieving the claimed degradation limitation.~~

~~306. The '526 patent lacks written description of the full scope of the claimed compositions.~~

2.1. '209 and '785 Patents

~~307.~~249. The '209 and '785 patents are invalid for lack of written description because the specifications do not describe the full scope of the claimed compositions.

~~308.~~250. The '209 and '785 patents broadly cover any vasopressin composition that has a pH of 3.7 to 3.9 and has 0.9% to 1.7% impurities having 85% to 100% sequence homology to vasopressin.

~~309.~~251. The only disclosures in the specification of a vasopressin composition having a pH of between 3.7 and 3.9 were formulated with a buffer.

~~310.~~252. The majority of these disclosures do not provide any stability data evidencing that the compositions achieved the claimed impurity levels.

~~311.~~253. The specification discloses only a single vasopressin composition having a pH of between 3.7 and 3.9 and formulated with an acetate buffer that provides individual impurity data.

~~312.~~254. Neither the '209 patent nor the '785 patent requires use of a buffer, nor use of acetate buffer specifically.

~~313.~~255. Further, the specification emphasizes that the choice of buffer can affect stability, indicating to a POSA that the choice of buffer can impact whether a given formulation will achieve the claimed impurity levels.

~~314.~~256. There is no disclosure in the specification evidencing that the inventors were in possession of any one of the other numerous compositions falling within the scope of the '209 and '785 patents that achieve the claimed impurity levels, including without use of a buffer or with a buffer other than acetate buffer.

~~315.~~257. Additionally, the sole disclosure of a vasopressin composition that was formulated to a pH of 3.7 to 3.9 and, at certain time points during the stability study, obtained the claimed impurity levels did not, at the same time, achieve "0.1%" SEQ ID NO.: 3 as required by claim 3 of the '209 patent and claim 4 of the '785 patent.

I. All Asserted Claims Lack Adequate Enablement

~~1. '526 Patent~~

~~316. As set forth above regarding written description, the '526 patent specification contains no disclosure of any formulation with a pH of 3.8 that satisfies the degradation limitation of the asserted claim.~~

~~317. At most, the specification of the '526 patent teaches a POSA how to make a composition with a pH 3.8 and an acetate buffer. The scope of the '526~~

~~patent claim 13, however, covers far more embodiments than just those formulations with acetate buffer.~~

~~318. The '526 patent does not teach a POSA how to make and use the full scope of claimed formulations that achieve less than 1% degradation after storage for four weeks under refrigeration with any other type of buffer or without any buffer. A POSA would need to engage in undue experimentation to determine how to prepare the full scope of formulations with different buffers at different concentrations or without a buffer that satisfy the degradation limitation and can be used in the recited method of treatment.~~

~~319. The inventors represented to the PTO that buffer selection, including concentration, and its effect on the stability of vasopressin formulations was unpredictable. Such unpredictability would have hindered a POSA's ability to practice the full scope of the invention as claimed and required additional undue experimentation.~~

~~320. Further, the specification emphasizes that the choice of buffer can affect stability, indicating to a POSA that the choice of buffer can impact whether a given formulation will achieve the claimed degradation level.~~

~~321. Par's expert also argues that peptide stability is unpredictable.~~

~~322. Par has further taken the position that a formulation with the recited amount of vasopressin, acetic acid, and water at pH 3.8 does not necessarily satisfy~~

~~the percent degradation limitation of the Asserted Claims to argue that the claims are nonobvious. If that is the case, there is nothing else in the '526 patent specification that teaches a POSA how to prepare a formulation that exhibits the requisite level of degradation.~~

~~323. Instead, because Par requires for nonobviousness teaching beyond the formulation and pH to achieve the degradation limitation, a POSA would need to engage in undue experimentation to determine how to prepare the full scope of formulations that exhibit less than 1% degradation when stored for about four weeks at 2–8 °C.~~

~~324. In addition, because, according to Par, not all formulations that meet the vasopressin, acetic acid, water, and pH limitations of the asserted claim achieve less than 1% degradation when stored for about four weeks at 2–8 °C, there must be a significant number of inoperative embodiments. The existence of such inoperative embodiments further undermines the predictability of the claimed invention across its full scope.~~

2.1. '209 and '785 Patents

~~325.258.~~ As noted above for written description, at most, the '209 and '785 patents teach a POSA how to make a composition with an acetate buffer that, at certain time points, satisfies the claims' impurity requirements.

~~326.~~259. The '209 and '785 patents do not teach a POSA how to make and use the full scope of claimed formulations that achieve the claimed impurity levels. A POSA would need to engage in undue experimentation to determine how to prepare the full scope of formulations with different buffers at different concentrations or without a buffer that satisfy the impurities limitations and, for the '209 patent, can be used in the recited method of treatment.

~~327.~~260. The inventors represented to the PTO that buffer selection, including concentration, and its effect on the stability of vasopressin formulations was unpredictable. Such unpredictability hinders a POSA's ability to practice the invention as claimed and requires additional undue experimentation.

~~328.~~261. Further, the specification emphasizes that the choice of buffer can affect stability, indicating to a skilled artisan that the choice of buffer can impact whether a given formulation will achieve the claimed impurity levels.

~~329.~~262. Par's expert also argues that peptide stability is unpredictable.

~~330.~~263. Par has further taken the position that a vasopressin formulation with pH 3.7 to 3.9 does not necessarily satisfy the impurities limitations of the Asserted Claims to argue that the claims are nonobvious. If that is the case, there is nothing else in the patent specifications that teaches a POSA how to prepare a formulation with the requisite levels of impurities.

~~331.~~264. Instead, because Par requires for non-obviousness teaching beyond the formulation and pH to achieve the impurity levels, a POSA would need to engage in undue experimentation to determine how to prepare the full scope of formulations that achieve the claimed impurity levels.

~~332.~~265. In addition, because, according to Par, not all formulations that meet the composition limitations achieve the impurities limitations, there must be a significant number of defective embodiments. The existence of such defective embodiments requires undue experimentation by a POSA to find those limited formulations that can achieve the asserted impurities limitations.

J. All Asserted Claims Are Indefinite

~~1. Less Than [X]% Degradation After Storage at 2-8°C for About Four Weeks~~

~~333. Claim 13 of the '526 patent is indefinite with respect to the following limitation: "less than [X]% degradation after storage at 2-8° C. for about four weeks."~~

~~334. Neither the specification nor the prosecution history inform a skilled artisan, with reasonable certainty, as to whether percent degradation refers to loss of vasopressin or formation of impurities.~~

~~335. Neither the specification nor the prosecution history inform a skilled artisan, with reasonable certainty, as to whether percent degradation is an absolute or relative measurement.~~

~~336. Neither the specification nor the prosecution history inform a skilled, with reasonable certainty, as to the proper time frame for measuring percent degradation.~~

2.1. When to Measure pH

~~337.~~266. Each of the Asserted Patents are indefinite with respect to when to measure pH of the claimed compositions.

~~338.~~ Neither the specification nor the prosecution history inform a skilled artisan, with reasonable certainty, as to whether pH is measured at the time of manufacturing, at the time of administration, or at any time during stability.

~~Additionally, with respect to claim 13 of the '526 patent, neither the specification nor the prosecution history inform a skilled artisan, with reasonable certainty, as to whether the claimed composition must first be "provided" with a pH of 3.8 prior to storage at 2-8°C for at least four weeks.~~

V. THIS CASE IS EXCEPTIONAL AND EAGLE SHOULD BE AWARDED ITS REASONABLE ATTORNEY FEES

A. Par Lacked a Reasonable Basis to Bring and Maintain this Suit Against Eagle

~~339.~~267. Well before Par filed its Complaint against Eagle asserting the Patents-in-Suit, Par was on notice that Eagle's ANDA product and its use upon approval would not infringe any of the Asserted Claims. Eagle informed Par in its Paragraph IV Notice Letter of April 16, 2018, that Eagle's ANDA product did not have a pH between 3.7 and 3.9, or 3.8, and, therefore, did not infringe the Patents-

in-Suit, and other patents previously asserted against Eagle. Subsequently, but before Par filed its Complaint, Eagle produced the relevant portions of its ANDA to Par, clearly providing the pH specifications of pH 3.4 to 3.6 for its ANDA product and thus informing Par that Eagle's ANDA product does not satisfy the composition limitations of the Asserted Claims.

340.268. In addition, Par knew, through Eagle's pre-suit production of its ANDA, that Eagle's ANDA product was a generic equivalent of Par's prior art Original Vasostrict® product and, therefore, that any allegation of infringement is effectively an admission that the Asserted Claims are invalid.

341.269. Before this suit was filed, Par knew that the '239 patent claims had only issued due to the successful disqualification of the April 2014 Vasostrict® Label as prior art during prosecution through the unmistakably false Kannan and Bonomi-Huvala Declarations. Par also knew that the '239 patent claims covered its prior art Original Vasostrict® product, and were therefore invalid. Given the unmistakable falsity of the Declarations submitted to secure the '239 patent claims and the clear invalidity of those claims, Par did not have a reasonable basis to assert the '239 patent in its Complaint.

342.270. Par specifically relied on its assertion of the '239 patent to avoid summary judgment briefing in this action. Par maintained that assertion for over a year, before dropping it from the case on the day it was required to provide discovery

that would have exposed the inequitable conduct, unilaterally evading that discovery.

~~343.271.~~ Because the '239 patent is a grandparent of the Patents-in-Suit and shares named inventors and many claim requirements, Par did not have a reasonable basis to assert the Patents-in-Suit as they are unenforceable through the doctrine of infectious unenforceability.

~~344.272.~~ Par further lacked a reasonable basis to assert the Buffer Patents in its Complaint, which have since been dismissed,⁹ as Eagle, again, explained prior to this lawsuit that its ANDA product did not satisfy the pH and acetate buffer limitations of those claims. During the *Markman* phase of the case, Par resisted a claim construction that would have excluded acetic acid from the scope of the “acetate buffer” term in accordance with its clear disclaimer during prosecution and maintained the Buffer Patents in the case even though, as confirmed by the named inventors during their depositions, it knew that acetic acid alone did not act as an

⁹ Par continued to assert the Buffer Patents despite lacking a reasonable basis to allege that Eagle’s ANDA product had the requisite pH, an acetate buffer, and could be used—in *express contravention of its proposed prescribing information*—to practice the method of the '223 patent. Despite lacking any reasonable basis to do so, Par continued to assert infringement of those patents until the very end of discovery and only after multiple named inventors confirmed that Eagle’s ANDA product could not infringe those patents.

acetate buffer in its Original Vasostrict® product and, therefore, could not act as an acetate buffer in Eagle's ANDA Product.

345.273. Nevertheless, Par proceeded to file this lawsuit and assert the Patents-in-Suit, as well as the '239 patent, ~~the~~ and Buffer Patents ~~and the~~ '526 patent, against Eagle despite having knowledge that Eagle's ANDA product did not and, if approved, could not have a pH within that of the Asserted Claims, and did not have an acetate buffer.

346.274. Following its Complaint, Par did not, at any juncture, have a reasonable basis to maintain this lawsuit against Eagle. Even after the completion of fact and expert discovery, Par has still not set forth any reasonable basis to maintain this litigation. Eagle's ANDA specification has not changed; its product must always have a pH of between 3.4 and 3.6. Instead, Par relies solely on a single anomalous result for a single batch of Eagle's ANDA product recorded at the end of its shelf life, evidence that, under settled Federal Circuit law, is not cognizable in view of the ANDA specification and, regardless, insufficient to satisfy Par's burden.

347.275. Eagle has also modified its commercial manufacturing process and specifications for the sole purpose of preventing such anomalies in the future after FDA approval. Par's expert has admitted he has no evidence that products made pursuant to that modified commercial process—as would occur after approval—will ever have a pH within the Asserted Claims.

~~348.~~276. In a misguided attempt to plug the glaring gaps in its evidence, after the close of expert discovery, Par submitted—without Eagle’s consent or leave of the Court—untimely supplemental expert reports from its expert Dr. Kirsch purporting to identify new theories, based on linear regression and prediction intervals, as to why the pH of Eagle’s ANDA Product is likely to rise into the claimed range.¹⁰ But after Eagle and its experts expended significant resources responding to those reports—including pointing out that Dr. Kirsch’s theories confirmed Eagle’s optimization of its manufacturing process had been successful and resulting batches SVA007–009 would never rise into the claimed range, and that the Asserted Claims are invalid over the prior art applying Dr. Kirsch’s new theories—Par withdrew those reports to try to avoid their consequences on non-infringement and invalidity.

~~349.~~277. Par was also aware throughout this litigation that the ’239 patent was obtained through inequitable conduct in the form of the false Kannan and Bonomi-Huvala Declarations and the representations that relied on them. Par, though, continued to maintain its allegations with respect to the ’239 patent up until

¹⁰ Par also produced sales data for prior art Pitressin lot 78495, establishing that this lot was sold prior to the earliest effective filing date of the Patents-in-Suit, on August 3, 2020. [Additional sales data establishing that a large number of additional lots of Original Vasostrict were sold prior to the earliest effective filing date of the Patents-in-Suit were not produced until January 19, 2021.](#)

the deadline to provide discovery regarding the conception and reduction to practice of that patent and its prosecution, on the eve of inventor depositions.

~~350.~~278. After Par ceased asserting the '239 patent, the inventors of that patent, including Vinayagam Kannan and Matthew Kenney, confirmed the Kannan and Bonomi-Huvala Declarations, as well as the representations based thereupon, were false. In fact, all inventors confirmed that they did not contribute to the subject matter set forth in those Declarations and Par's 30(b)(6) witness testified that Par lacked any evidence that any particular individual was responsible for the subject matter set forth in those Declarations.

~~351.~~279. Thus, even if Par did not believe that the '239 patent was obtained through fraud at the outset of this lawsuit, it clearly learned of the underlying inequitable conduct during this litigation but continued to assert the '239 patent until near the end of discovery. Par further continued to assert the Patents-in-Suit despite the fact that they are unenforceable under the doctrine of infectious unenforceability based on inequitable conduct during prosecution of the '239 patent.

~~352.~~280. Eagle also pleaded, in detail, the unenforceability of the '239 patent and how the doctrine of infectious unenforceability affects the Patents-in-Suit in its October 28, 2019 Amended Answer and Counterclaim. Par has, however, maintained this suit thereafter.

~~353.~~281. Because Par lacked a reasonable basis to bring and maintain this suit, this case is exceptional and Eagle should be awarded its reasonable attorney fees.

B. Par Brought this Suit in Bad Faith

~~354.~~282. Par brought this suit in bad faith in order to maintain its monopoly on the supply of vasopressin.

~~355.~~283. Par pursued an NDA for vasopressin pursuant to the FDA's Unapproved Drugs Initiative ("UDI").

~~356.~~284. Under the UDI, the FDA encouraged manufacturers to submit NDAs for unapproved grandfathered products that had been marketed since before the advent of the formal FDA approval process. Such grandfathered products may be made and sold without FDA approval.

~~357.~~285. In exchange for filing an NDA and obtaining formal FDA approval, manufacturers would receive a brief period of de facto exclusivity because competing unapproved products were to be removed from the market and made to pursue their own regulatory approvals. No special regulatory exclusivities were attached to NDAs submitted and approved per the UDI.

~~358.~~286. Par has had a monopoly on the supply of vasopressin since December 2014, when, following the approval of Par's NDA for its unapproved

vasopressin product, the FDA removed all competing vasopressin products from the market.

~~359.~~287. Par obtained and asserted the Patents-in-Suit in order to extend its de facto exclusivity with a patent monopoly and prevent competing vasopressin products from returning to the market.

~~360.~~288. During that time, Par has increased the price of vasopressin from approximately five dollars per vial to well over one hundred thirty dollars per vial. Because vasopressin is a life-saving drug used to treat refractory cases of lethal conditions, hospitals have continued to purchase and use vasopressin notwithstanding Par's monopoly pricing.

~~361.~~289. Although Par lacked a reasonable basis to assert the Patents-in-Suit, as well as the those patents that have been dismissed, against Eagle, it did so in order to obtain a thirty month stay of approval of Eagle's ANDA under the Food, Drug, and Cosmetic Act. If Par did not bring this baseless litigation against Eagle, Eagle's ANDA would have been eligible for approval as soon the FDA deemed appropriate. Eagle would be free to launch as soon as it received such approval. Instead, Eagle's ANDA is ineligible for final approval until Eagle either prevails in this Court or October 2020.

~~362.~~290. Thus, by filing and maintaining this baseless suit, Par was able to guarantee that its monopoly would not be broken by Eagle for more than two

additional years. During that time, Par has continued to increase the price of vasopressin and enjoy monopoly profits.

~~363.~~291. On November 25, 2020, the FDA announced that it was terminating the UDI because it had determined that, under this initiative, the prices of previously unapproved drugs had increased significantly. Termination of the Food and Drug Administration’s Unapproved Drugs Initiative, 85 Fed. Reg. 75,331, 75,332 (Nov. 25, 2020) (“After the UDI began, reports emerged that Americans were paying significantly more for prescription drugs approved by FDA through the UDI than they had paid previously.”).

~~364.~~292. In its announcement regarding the termination of the UDI, the FDA cited the pricing of vasopressin following the approval of Par’s NDA in support of its decision. Termination of the Food and Drug Administration’s Unapproved Drugs Initiative, 85 Fed. Reg. 75,331, 75,332 (Nov. 25, 2020) (“Another report asserted that ‘[t]hanks at least partially to the FDA program, the price of vasopressin . . . has risen 10-fold’” (alterations in original) (citation omitted)).

~~365.~~293. Because this suit was brought in bad faith, this case is exceptional and Eagle should be awarded its reasonable attorney fees.

C. Par’s Engaged in Inequitable Conduct to Procure the Patents-in-Suit

~~366.~~294. As set forth above, Par obtained the Patents-in-Suit through inequitable conduct and, in addition, the Patents-in-Suit are tainted and

unenforceable on account of the inequitable conduct that occurred in the parent '239 patent prosecution.

~~367.~~295. Because Par engaged in inequitable conduct, this case is exceptional and Eagle should be awarded its reasonable attorney fees.

D. Response to Par's Allegations in Paragraphs 271–279 of Par's Statement of Contested Facts

~~368.~~296. Par's allegations concerning the parties' disputes during fact discovery are not germane to issues to be decided at trial. Further, Eagle disagrees with Par's characterizations of the parties' discovery disputes for the following reasons:

- An unredacted copy of Eagle's ANDA, including FDA correspondence received and submitted to that point, was provided nearly five weeks prior to service of Par's initial infringement contentions in December 2018, in accordance with the Scheduling Order.
- Eagle did not avoid its discovery obligations or withhold any evidence of infringement. To the contrary, Eagle provided all available stability data for its ANDA Product, FDA correspondence, and ANDA submissions well-before the end of fact discovery, including prior to Rule 30(b)(6) depositions of Eagle witnesses designated on topics related to stability data, FDA correspondence, and Eagle's ANDA. To the extent any additional stability data were generated after the end of fact discovery,

Eagle has continued to supplement its production with the additional stability data.

- Eagle's delay in producing the Complete Response Letter (CRL) it received from the FDA was inadvertent, caused no prejudice to Par, and has no bearing on any issues in this case. Eagle's counsel produced the CRL immediately upon learning of its existence. Eagle subsequently produced its response to the CRL the day after it submitted the response to the FDA. Both the CRL and Eagle's response thereto were produced before the end of fact discovery, including prior to Rule 30(b)(6) depositions of Eagle witnesses designated on topics related to FDA correspondence and Eagle's ANDA, well before Par's final infringement contentions and opening expert reports were served.
- The only evidence Par and its experts rely on for alleged infringement—an out-of-specification pH measurement for SVA001—was produced before Eagle produced the CRL. Neither Par nor Par's experts have relied on the CRL itself to support Par's allegations of infringement or for any other purpose, confirming that it suffered no prejudice from the timing of the CRL's production, and that the CRL is not responsible for Par's baseless infringement claims.

VI. PAR IS NOT ENTITLED TO INJUNCTIVE OR MONETARY RELIEF

~~369.~~297. Par cannot prove that it is entitled to a judgment against Eagle for infringement of any Asserted Claim.

~~370.~~298. Par cannot prove that it is entitled to any relief because Eagle does not infringe any valid, enforceable claim of the Patents-in-Suit.

~~371.~~299. Par cannot prove that it is entitled to injunctive relief.

~~372.~~300. Par cannot prove that it suffered irreparable injury or harm.

~~373.~~301. Par cannot prove that the legal remedies available to it are inadequate to compensate any alleged injury or harm.

~~374.~~302. Par cannot prove that the balance of hardships favors an injunction.

~~375.~~303. Par cannot prove that an injunction is in the public interest.

~~376.~~304. Par cannot prove that it is entitled to damages or other monetary relief.